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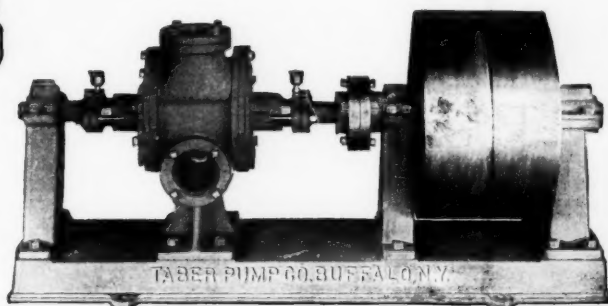
SEPTEMBER 9, 1916

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THE NATIONAL PROVISIONER

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No. 11.

EXPORTS OF MEAT PRODUCTS.

Exports of meat and dairy products in July, according to government reports, were \$4,500,000 less in value than for the same month a year ago. They totalled \$15,118,167 compared to \$19,660,673 in July, 1915. Canned beef exports for that month were 7,000,000 pounds less than a year ago; fresh beef exports, 5,000,000 pounds less; cured beef, 6,000,000 pounds less; bacon, 8,000,000 pounds less; hams 12,000,000 pounds less; oleo oil, 3,000,000 pounds less. Lard exports were about 4,500,000 pounds greater.

For the seven months since the beginning of the year meat product exports totalled just about the same as a year ago, in each period the total value being something over \$155,000,000. The falling off in exports of canned, fresh and cured beef, oleo oil and lard being made up by increased shipments and value of bacon, hams and pickled pork.

A synopsis of export figures for July, with comparisons, is as follows:

	July, 1916.	July, 1915.
Beef, canned, lbs.	2,915,630	10,060,222
Beef, canned, value	\$699,203	\$1,446,660
Beef, fresh, lbs.	16,672,660	21,378,100
Beef, fresh, value	\$2,209,723	\$2,728,293
Beef, pickled, etc., lbs.	2,804,736	9,150,121
Beef, pickled, etc., value	\$312,435	\$935,759
Oleo oil, lbs.	5,224,062	8,338,017
Oleo oil, value	\$717,576	\$1,036,044
Bacon, lbs.	29,977,931	37,971,594
Bacon, value	\$4,022,673	\$5,233,444
Hams and shoulders, lbs.	14,939,891	26,970,771
Hams and shoulders, value	\$2,310,587	\$3,820,688
Lard, lbs.	25,542,205	21,021,515
Lard, value	\$3,544,481	\$2,195,076
Neutral lard, lbs.	1,544,137	1,191,867
Neutral lard, value	\$210,606	\$129,093
Pork, pickled, etc., lbs.	3,318,763	5,162,420
Pork, pickled, etc., value	\$408,559	\$542,667
Lard compounds, lbs.	2,765,367	5,353,666
Lard compounds, value	\$341,743	\$453,266
Total value	\$15,118,167	\$19,660,673

For the seven months since January 1, compared to a year ago, the comparison is as follows:

	7 mos. '16.	7 mos. '15.
Beef, canned, lbs.	29,418,422	56,202,576
Beef, canned, value	\$6,320,564	\$8,738,233
Beef, fresh, lbs.	127,325,825	163,027,502
Beef, fresh, value	\$15,750,478	\$20,895,559
Beef, pickled, etc., lbs.	17,633,032	28,715,492
Beef, pickled, etc., value	\$1,888,338	\$3,079,540
Oleo oil, lbs.	45,641,309	55,283,168
Oleo oil, value	\$5,905,360	\$6,716,223
Bacon, lbs.	331,764,558	288,733,039
Bacon, value	\$46,029,552	\$58,542,516
Hams and shoulders, lbs.	172,930,172	169,742,580
Hams and shoulders, value	\$25,086,968	\$23,644,927
Lard, lbs.	270,358,834	290,671,511
Lard, value	\$32,591,786	\$31,927,884
Neutral lard, lbs.	19,396,443	20,017,527
Neutral lard, value	\$2,430,805	\$2,302,738
Pork, pickled, etc., lbs.	75,581,367	37,132,032
Pork, pickled, etc., value	\$8,829,730	\$3,962,713
Lard compounds, lbs.	26,882,579	40,729,987
Lard compounds, value	\$2,980,232	\$3,496,486
Total value	\$155,626,500	\$155,257,395

Packinghouse, provision, refrigeration and other machinery and equipment at second-hand. Buy it or sell it through The National Provisioner's "Wanted and For Sale" department on page 48.

OLEO INGREDIENTS MUST BE PASTEURIZED Government Order Shows Its Attitude Toward Dairy Products

The Federal meat inspection authorities have issued an order directing Federal inspectors in oleomargarine plants to see to it that no milk or cream is used in making oleomargarine unless it is pasteurized. And they are also instructed that after the present year no butter can be used in oleomargarine unless it is made from pasteurized products.

That is, the Federal government recognizes that raw dairy products are disease carriers.

Its supervision of the manufacture of all meat products, of which oleomargarine is technically one, is very thorough under the Federal meat inspection act. It does not permit the use of any unhealthy or unwholesome ingredient in a meat product which is to bear the government inspection stamp. Therefore it refuses to permit the use of unpasteurized dairy products, as being unwholesome and having possibilities as disease carriers.

The order to meat inspectors was issued under date of August 19 by the Bureau of Animal Industry, and was published in the monthly service announcements sent to in-

spectors and to inspected houses. Milk and cream cannot be used unless pasteurized, and butter from unpasteurized products will be barred after this year. The delay in the latter case is to give manufacturers time to make contracts for next year so as to comply with the regulation.

The official order of the Bureau of Animal Industry, having supervision of the Federal meat inspection service, is as follows:

"Milk and cream used in the preparation of oleomargarine should be pasteurized, and butter used for this purpose should be made only from pasteurized products. The owners and operators of official establishments where oleomargarine is prepared should take immediate steps to insure the pasteurization of all milk and cream used in preparing oleomargarine, and after the present year all butter used in oleomargarine shall be made from pasteurized products. This advance notice respecting butter is given in order that contracts for purchases may be made accordingly."

AUGUST MEAT SUPPLY FIGURES.

Official reports of receipts of meat animals at eight principal centers for the month of August show that cattle marketing, including stockers and feeders, was 200,000 head in excess of a year ago, hog marketing was over 400,000 head greater, and receipts of sheep and lambs were 80,000 head more. For the eight months of the year cattle receipts at eight points were about 700,000 head in excess of a like period in 1915, hog marketing was over 2,000,000 head more, and sheep and lamb receipts were about 250,000 head greater than last year.

A synopsis of receipts of both slaughtering and feeding stock at eight chief markets for August is as follows, with totals compared:

	Cattle.	Calves.	Hogs.	Sheep.
Chicago	230,507	36,705	587,439	409,803
Kansas City	264,230	22,701	219,589	119,995
Omaha	122,355	*	199,212	382,492
St. Louis	125,890	*	208,822	75,657
St. Joseph	42,463	3,306	147,708	60,245
St. Paul	39,682	1,552	123,657	37,058
Port Worth	73,965	17,735	87,540	22,676
Port Worth	67,024	23,019	64,620	24,252
TL. Aug., 1916.	965,426	105,015	1,638,587	1,132,178
TL. Aug., 1915.	764,325	70,928	1,214,473	1,047,118

*Calves not separately reported.

Receipts for eight months ending August, 1916, with totals compared:

	Cattle.	Calves.	Hogs.	Sheep.
Chicago	1,549,568	376,931	5,742,953	2,488,021
Kansas City	1,178,148	65,820	1,944,403	1,055,171
Omaha	779,109	*	2,262,170	1,546,481

St. Louis	634,507	1,938,206	478,300
St. Joseph	256,029	17,400	1,389,023
Sioux City	326,101	13,279	1,464,630
St. Paul	367,416	130,953	1,744,928
Port Worth	539,548	83,216	663,485

TL. 8 Mos.	16,563,426	687,599	17,149,798
TL. 8 Mos.	15,490,355	560,162	14,347,907

*Calves not separately reported.

STOCKS OF PROVISIONS.

Official reports of stocks of provisions on hand at important centers at the beginning of the present month indicate decreased supplies as compared to a month ago, and much-reduced stocks as compared to last year at this time. A synopsis is as follows:

	Pork, Bbls.	July 31, 1916.	Aug. 31, 1915.
Chicago	52,336	60,672	108,969
Kansas City	3,376	5,612	5,210
Omaha	5,111	3,571	3,607
St. Joseph	2,255	3,398	3,056
Milwaukee	1,918	2,463	8,814
Total	64,976	75,766	129,596

	Lard, Lbs.	July 31, 1916.	Aug. 31, 1915.
Chicago	60,580,812	75,860,701	100,925,300
Kansas City	2,962,491	3,117,486	2,348,160
Omaha	4,524,721	4,256,444	3,202,990
St. Joseph	2,216,961	2,070,209	1,604,700
Milwaukee	1,067,450	1,398,050	5,171,740
Total	71,292,375	86,702,980	112,652,990

	Out Meats, Lbs.	July 31, 1916.	Aug. 31, 1915.
Chicago	110,147,015	124,411,536	152,438,717
Kansas City	46,011,000	52,266,500	40,946,460
Omaha	43,053,609	59,859,178	47,817,791
St. Joseph	31,391,267	32,446,251	23,244,933
Milwaukee	7,935,820	10,408,400	20,261,969
Total	238,539,311	269,387,865	284,709,810

MEAT SITUATION IN THE UNITED STATES Production, Consumption and Prices as Shown by Statistics

By George K. Holmes, U. S. Bureau of Crop Estimates.

(Continued from issue of August 26.)

[EDITOR'S NOTE.—This report, the most important result of the appointment of the Galloway Commission several years ago, was summarized in a recent issue of *The National Provisioner*. Showing, as it does, that meat production has not kept pace with consumption, it will be of the greatest interest to producers and consumers alike.]

CATTLE PER CAPITA OF POPULATION.

When one turns from the absolute number of cattle in the many countries that have been considered to the number relative to the population, the import of the narrative changes. In some of the countries there has been a decrease of cattle absolutely in recent years, in other countries a stationary number, and in other countries increases small and great; but when the number of cattle is related to the number of the people in all of the countries for all of the years, it becomes evident that the world is diminishing its dependence upon beef for its food.

United States.

The farms and ranges of this country had a larger ratio of cattle per capita of the population in 1900 than in any other year, as far as ascertained. The ratio for that year was 0.89 of one animal, and this approximately indicates the period of the greatest expansion and utilization of the range. If, however, the earliest animal census year, 1840, is considered, a ratio of 0.88 of one animal is found, barely below the ratio for 1900, but the earlier year was a time when meat was a much larger fraction of the national dietary than in 1900, and, besides, in the latter year an immense amount of beef and beef products was exported.

Taking the census years in order, the ratio of cattle per capita fell from 0.88 of one animal in 1840 to 0.77 of one animal in 1850, but there was some recovery to 0.81 of one animal in 1860. In 1880 the comparatively low ratio of 0.72 of one animal is found, but afterward the ratio rapidly rose to 0.82 of one animal in 1890, and to 0.89 of one animal in 1900. In 1910 the census was taken April 15 instead of June 1, and if the census number of cattle in 1910 be increased to a June 1 basis, the ratio to population becomes 0.71 of one animal, or a lower average than has been ascertained for any previous census except 1870.

On the basis of April 15 the census of 1910 showed a per capita cattle ratio of 0.67 of one animal, and the estimates of the Bureau of Crop Estimates for subsequent years show a continual decline to 0.57 of one animal in 1914, but there was an indication of some recovery in 1915, when the estimate indicated a per capita cattle ratio of 0.58 of one animal, and in 1916 with a ratio of 0.60 of one animal.

Milch cows also have declined in comparison with the population. In 1850 there was 0.28 of one milch cow per capita, and after some fluctuations the ratio declined to 0.22 of one animal in 1910. The estimates of the Bureau of Crop Estimates indicate a subsequent decline to 0.20 of one animal in 1915, followed by recovery to 0.22 of one animal in 1916.

Other Countries.

Algeria.—From 1887 to 1912 the number of

cattle per capita of the population decreased from 0.31 of one animal to 0.20, with a uniform diminution to 1907 and with a stationary ratio afterward. The cows also diminish per capita.

Argentina.—At the time of the census of 1888 there were 5.9 cattle per capita; the census of 1895 announced 5.5 cattle, and the census of 1908, 4.7 cattle. The estimates of the national department of agriculture made annually show a diminishing number of cattle per capita from year to year, with a ratio of 3.6 cattle for 1914.

Australia.—In 1890 there were 3.3 cattle per capita; in 1892, 3.6 cattle; in 1902, 1.8 cattle; in 1910 and 1911, 2.7 cattle, and in 1913, 2.4 cattle. The ratio increased to 1892, declined steadily to 1902, increased steadily to 1911, and afterward declined. At the present time a decline in per capita number of cattle is the tendency, and there is now a decline as compared with 1890 and 1899.

Dairy cows increased from 0.35 of one animal per capita in 1901 to 0.48 of one animal in 1911, but since that year the decline has been to 0.43 of one animal in 1913.

Austria.—From 1890 to 1910 the ratio of cattle to population is a story of continuous decline, the ratio for 1890 being 0.36 of one animal and for 1910, 0.32. During the same time the cows declined from 0.18 of one animal to 0.17.

Hungary.—In Hungary there seems to be a nearly stationary ratio between cattle and population since 1884. In that year the ratio was 0.34 of one animal, and in 1909 and 1911 it was 0.35, the intermediate years showing slight fluctuations.

Belgium.—From 1900 to 1913 there was an almost stationary ratio between cattle and population at 0.25 of one animal, and similarly the ratio for dairy cows was 0.12 of one animal.

Brazil.—Subject to doubts concerning the accuracy of the estimates of cattle in Brazil, the per capita ratios are 1.11 animals in 1910 and 1.23 animals in 1913 and 1914.

British East Africa.—The ratio of cattle to population in this colony increased from 0.15 of one animal in 1908 to 0.23 in 1912.

British South Africa.—This region also presents an increasing ratio of cattle to population, or according to the census 0.78 of one animal per capita in 1904 and 1.18 animals in 1911.

Bulgaria.—The declining ratio of cattle to population is shown by the four censuses from 1892 to 1910, during which period the ratio of cattle to population declined from 0.43 of one animal to 0.37.

Canada.—1908 was the culminating year in this country in regard to the per capita number of cattle. The ratio was 0.85 of one animal in 1891, and this grew to 1.13 animals in 1908, after which there was a decline that was broken only once to 0.75 of one animal in 1914.

A similar course of increasing ratio to 1908, followed by a decreasing one, is observed in the case of milch cows.

Chile.—As has already been remarked as

to the uncertainty of the cattle estimates for Chile, little dependence can be placed on the per capita ratios. There would seem, however, to be a nearly uniform ratio of about 0.5 of one animal per capita from 1910 to 1913. The dairy cows are apparently about 0.06 of one animal per capita.

Colombia.—Subject to doubt concerning the estimates of cattle for this country, the per capita ratio for 1893 is 0.65 of one animal; for 1896 it is 0.77 of one animal; for 1909 it is 0.76 of one animal, and for 1915 it is 1.27 animals.

Cuba.—Previous to the Cuban insurrection of about 20 years ago, the per capita number of cattle on this island was about 1.4 animals, but the ratio declined quickly and enormously to 0.24 of one animal in 1899, when the census was taken by the United States. After that year the ratio steadily ascended, year by year, to 1.44 animals in 1910, subsequent to which year a decline appears to 1.21 animals in 1912.

Denmark.—A declining ratio of cattle per capita appears from 1893 to 1903, showing a decline from 0.77 of one animal to 0.73, but the ratio for 1909 made a notable gain to 0.83 of one animal, or a larger ratio than existed 16 years before. A similar trend is observable in the case of dairy cows; their ratio per capita was 0.46 of one animal in 1893, 0.43 in 1903 and 0.47 in 1909.

Finland.—Although this country seems to have reached stationary conditions in recent years, a decline in per capita number of cattle appears upon going back as far as 1890. In that year the ratio was 0.55 of one animal, and this remained about stationary to 1900, after which there was a decline to about 0.50 or 0.51 of one animal per capita to 1910. A similar movement of ratio is shown for cows.

France.—Subject to some small fluctuations the per capita number of cattle in this country increased from 0.35 of one animal in 1890 to 0.38 in 1901 and 1902, after which years the ratio remained at 0.36, with one exception, to 1911, and then follow two years with a ratio of 0.37 of one animal. From first to last France has increased its per capita ratio of cattle a little during the period of 23 years. A similar course of per capita ratios is observable in the case of cows.

German East Africa.—After the per capita number of cattle had remained at 0.08 of one animal from 1903 to 1905, the ratio jumped to 0.2 of one animal in 1911.

Germany.—A steady decline of ratio of cattle to population appears from 1892 to 1913, the ratio for the former year being 0.35 of one animal and for the latter year 0.31.

Greece.—The little that is known for this country does not warrant an inference with regard to the trend of the per capita number of cattle; the ratio for 1902 was 0.16 of one animal and for 1912 it was 0.15.

Italy.—During a period of 18 years, or from 1890 to 1908, the per capita number of cattle in this kingdom increased from 0.17 of one animal to 0.18.

Japan.—The comparatively few cattle in this country have remained almost constantly at 0.03 of one animal per capita of the population from 1890 to 1912, and the cows have remained at 0.02 of one animal.

(Continued on page 41.)

MUNICIPAL ABATTOIRS IN NEW ZEALAND

All Killing for Local Consumption Must be Done There

By Commercial Attaché Philip B. Kennedy, Melbourne, Australia.

[EDITOR'S NOTE.—Mr. Kennedy's report on municipal abattoirs in New Zealand shows a different situation from that in Australia. A uniform national law rules everywhere, and local slaughtering must be done at municipal slaughterhouses. It will be noted, however, that export business is done by private enterprise, as it is in Australia.]

With two exceptions—where municipalities have delegated their powers to freezing companies, as is provided for in the slaughtering and inspection act—all abattoirs in New Zealand are municipally owned and controlled. These are utilized principally for the slaughtering of stock for consumption within the Dominion. With the exception of a few animals slaughtered for export at the principal abattoirs, all meat exported is from stock slaughtered at licensed export slaughterhouses.

The municipal ownership of the abattoirs has worked satisfactorily in every way. The butchers have found that having their stock slaughtered at an abattoir does not entail any special inconvenience or expense to them, and the public is assured that its meat supply is free from disease and that it is dressed and handled under the best sanitary conditions.

Provisions of Slaughtering and Inspection Act.

The slaughtering and inspection act, 1908 (consolidated), was originally passed in 1900. Some of the principal features of the act, in so far as they apply to abattoirs and inspection of meat for local consumption, are as follows:

Provision is made for the compulsory erection and future maintenance of public abattoirs for the slaughter of meat for local consumption by all municipalities of a population of 2,000 or over, as revealed in the last official census returns, such buildings to be erected within a period of twelve months from the gazetted of the census returns, provided extension of time not to exceed twelve months may be granted by the governor in special cases.

Before proceeding with the erection of an abattoir, the plans must be submitted to and approved by the Minister for Agriculture. On the completion of the erection of a public abattoir the same is required to be registered, and, by advertisement in a newspaper circulated in the district, the registration is to be notified to the controlling authority, with an intimation that on and after a certain date (to be stated) the abattoir will be available for the slaughter of stock. After the expiration of the specified interval all stock for consumption within the borough or other defined area must be slaughtered in such building.

The act provides that local authorities may defray the expense of establishing and maintaining abattoirs, including the expense of acquiring land, if necessary, out of the municipality's general funds; but, if so desired, they are also authorized to borrow money from the Treasury for the purpose of erecting the abattoir, but not for its maintenance.

The local or controlling authorities may make by-laws prescribing the charges for the use of the abattoir, slaughter of stock, etc., approval having been first obtained from the governor.

Use of Registered Slaughterhouses Obligatory.

The local authority, in lieu of itself establishing an abattoir, may, except in the case of the principal municipalities which are specified in the act, delegate to any fit person or persons the power to establish an abattoir on such terms and conditions as are agreed on and approved by the minister. This proviso was intended principally to apply to districts where a registered export slaughterhouse was already in existence and could be made available for the slaughter of stock for local consumption if desired. The proviso has been taken advantage of only two or three times, and in at least one instance the local authority has decided to establish an abattoir itself.

An abattoir may be available for the whole or part of any contiguous district or districts, as may be agreed upon by the local authorities concerned, and in such an event it would not be necessary for each municipality to itself establish an abattoir.

Subject to certain provisions relating to export slaughterhouses the act provides that so long as a registered abattoir is available for slaughtering stock for a certain district it shall not be lawful to slaughter in any part of such district any stock for human consumption or for export, or to dress any carcass for sale except at a registered abattoir, or to sell or expose for sale in any such district any meat slaughtered elsewhere than in a registered abattoir.

Slaughterhouses whose principal business is the canning of meat or the curing of bacon and hams may from time to time be exempted by the governor from the operation of this paragraph, with the stipulation that such exemption shall apply only to the meat canned or the bacon or ham cured in the course of such business.

Provisions Relating to Export Slaughterhouses.

A meat-export slaughterhouse license, while it continues in force, authorizes the licensee to slaughter in his abattoir stock for human consumption throughout New Zealand, or for export beyond New Zealand, provided meat from stock slaughtered in an export slaughterhouse shall not be sold or exposed for sale in a district in which there exists a registered abattoir available for the slaughter of stock, except on the payment to the controlling authority of the abattoir of such fees as are agreed upon, being in no case less than the fees that would be chargeable for the use of the abattoir (exclusive of the cost of slaughtering) were the stock slaughtered therein.

The provisions regarding the slaughter of

stock at an abattoir or meat-export slaughterhouse are that no stock shall be killed without the authority of an inspector, and that upon the slaughter of any in an abattoir or export slaughterhouse the carcasses shall be inspected and no meat shall be removed therefrom for human consumption or for export unless it is declared to be free from disease.

The fees payable to the Government for inspection are \$0.08 for every head of cattle and \$0.06 for every 12 (or fraction of 12) calves, sheep, or pigs; the minimum fee in every case to be \$33.60 in any one month during which the inspector was engaged.

The act provides for the owners of ordinary slaughterhouses which were in existence on the date of the passing of the act of 1900 and compulsorily closed under the provisions of this act, owing to the erection of a public abattoir, to be compensated to the extent of one-half the value of the buildings constituting the slaughtering place in existence on that date, as shown in the valuation roll of the district.

Compensation for Condemned Stock.

The scale of compensation for stock condemned at present in force is as follows:

Heifers and bullocks not exceeding 8 years of age, and in every case of not less value than \$14.40 per head—\$0.02 per pound, dressed weight, of meat condemned, not including the head or any part of the animal below the knee or hock.

Lambs and sheep (other than rams) not exceeding 5 years of age, and in every case of not less value than \$2.40 per head—\$0.02 per pound, dressed weight, of meat condemned, not including the head or any part of the animal below the knee or hock.

Swine of not more than 200 pounds—\$0.04 per pound, dressed weight, not including the head.

Swine of more than 200 pounds—\$0.02 per pound, dressed weight, not including the head.

Cows not exceeding 10 years of age, and of not less value than \$14.40 per head—\$0.015 per pound, dressed weight, of meat condemned, not including the head or any part of the animal below the knee or hock.

Calves of not less than 60 pounds, dressed weight—\$0.015 per pound, dressed weight, of meat condemned, not including the head or any part of the animal below the knee or hock.

This scale was brought into force by an amendment to the original act in 1910. In some respects it is now proposed to revert to the original scale, as the high price now ruling for stock makes the compensation per pound less remunerative to the owners of condemned stock than under the old scale. As originally fixed the charges were:

(a) In the case of fat marketable cattle not exceeding 8 years of age and of not less value than \$14.40, the compensation payable in respect of each such animal shall be one-third of its value.

(b) In the case of pigs the compensation shall be: (1) For each pig weighing not less than 50 nor more than 100 pounds, dead weight, \$1.20; (2) for each pig weighing more than 100 pounds, dead weight, \$2.40.

(c) That compensation shall not be payable unless the owner of the stock makes application therefor in the prescribed manner and form, and satisfies the inspector that the stock so slaughtered is in fact diseased and has been disposed of as required by section 35 of the act.

ELEVENTH of the American Meat Packers' Association
ANNUAL
MEETING at **CINCINNATI** **OCTOBER 9, 10 and 11**

PRACTICAL POINTS FOR THE TRADE

[EDITOR'S NOTE.—Nothing but actual, bona fide inquiries are answered on this page of "Practical Points for the Trade." The National Provisioner uses no "made-up" queries, with answers taken out of old, out-of-date books. The effort is made to take up and investigate each question as it comes in, and to answer it as thoroughly as time and space will permit, with a view to the special need of that particular inquirer. It must be remembered that the answering of these questions takes time, and that the space is necessarily limited, and the inquirers must not grow impatient if the publication of answers is delayed somewhat. It should also be remembered that packing-house practice is constantly changing and improving, and that experts seldom agree, so that there is always room for honest difference of opinion. Readers are invited to criticize what appears here, as well as to ask questions.]

COMPOUND LARD FORMULAS.

The following inquiry comes from a subscriber in the Far West:

Editor The National Provisioner:

Will you please favor us with a formula for making compound from lard and tallow? Also a formula for mixing lard and cottonseed oil into compound.

In the manufacture of compound lards the principal compounds are cottonseed oils, lard and oleo stearines and edible tallows, the percentages used varying according to the prices of the components, prices obtainable for the finished product and the season of the year or destination of the compound.

Formulas may be as follows: Cottonseed oil and oleo stearine, cottonseed oil and tallow; tallow, lard, stearine and cottonseed oil, and so on. Too much tallow will make the compound mealy or crumbly; too much cottonseed oil will make it too soft, and so on.

Nothing but edible and fresh fats and oils—animal and vegetable—are permissible in the manufacture of these lard substitutes. For some purposes or districts the components need not be bleached; in other instances the product must be pure white; in appearance as nearly like refined lard as possible.

There is no "natural" stiffness of compound lard, as it is not a natural fat, but an artificial mixture, the hardness of which is

regulated by formula, which in turn will influence the time for obtaining its "natural" body. A compound composed of cottonseed oil and beef stearine having a yellowish cast when fresh will retain this color, providing the mixture is well made; that is, good and "dry" components, well compounded, and the packages clean and good.

Compounds exposed to air, dampness and fluctuating temperatures, etc., may decompose somewhat, but will not bleach to any extent. There may, however, at different stages be changes of color resulting.

A very good compound formula is as follows: 70% bleached cottonseed oil, 10% oleo stearine, 15% tallow and 5% prime steam lard. Such a formula would show a titer test around 36°; 38°, however, would be preferable, necessitating the use of a larger percentage of the harder components—tallow and oleo stearine.

To make the matter more intelligible in discussing the appended formula, we herewith present the titers of the constituents named: Prime steam lard, 36@37° C.; oleo stearine, 49@51° C.; tallow, 42@44° C.; cottonseed oil, 30@33° C.; lard stearine, 40@44° C.

Example: 75% lard at 37° C., $75 \times 37 = 27.75$; 15% tallow, at 43°, $15 \times 43 = 6.45$; 10% cottonseed oil, at 33°, $10 \times 33 = 3.30$; making a total of 37.50° C. titer; an exceptionally good formula.

Another: 70% cottonseed oil, 10% tallow and 20% of oleo stearine, making a titer of 37.60° C.

Another Cottonseed oil, 80%; oleo stearine, 20%. Another: Cottonseed oil, 75%; oleo stearine, 10%; tallow, 15%. The titers of these last two are, respectively, 36.60° and 36.30° C. A formula of 70, 20 and 10%, respectively, of cottonseed oil, stearine and steam lard would show a titer of 37° C.

We are frequently asked how to effect the grainy consistency of compound. The process

is as follows: Draw the compound at 120° to 130° F. into the tierces and roll into the cooler at 50° F., and allow to stay without moving three to four days. Then store in the cooler at 35° F. until shipped. Thus is effected a grainy compound. Ordinarily, however, compound is drawn as cool as possible, and under constant agitation, so that there may be no separation of the component parts.

There are no hard and fast formulas for making compound; prices and weather conditions principally govern this matter. A loose system of formulating on a pound or percentage basis, regardless of the hardness of the individual ingredients, is not a sensible procedure.

FEEDING AND MARKETING POULTRY.

(Continued from last week.)

Feeders vary in their ideas of poultry food constituents. One formula is 80% butter-milk, 10% cornmeal and 10% oatmeal, thoroughly amalgamated and fed to the chickens two or three times per day; some advocate twice per day, in the middle of the forenoon and late in the afternoon, keeping them in the dark except when feeding. This method is applicable, of course, to the final fattening of the chickens, which extends over, say, two weeks at most.

Some feeders use raw suet (beef fat) chopped fine, say about 3 pounds to each 25 pounds of oatmeal, and the whole worked up into a dough with skimmed milk or buttermilk, the latter preferable. No other food is given the birds during this period of finishing.

The chickens are kept in coops, usually about six to the coop, which is about two feet square and one foot deep, fitted with a drinking trough and a slide bottom so they can easily be kept clean.

Meat packers put up a poultry food valuable in rearing and the first stages of feeding. (Continued on page 28.)

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New York and
Chicago

Official Organ American Meat Packers'
Association

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THE GOVERNMENT RULES

The Federal Government has issued an order requiring that all milk and cream used in the manufacture of oleomargarine must be pasteurized, and that if butter is used it must be made from pasteurized products. Oleomargarine, technically a meat product, comes under the terms of the federal meat inspection act, and is therefore subject to the severe and thorough system of government meat inspection which guarantees the healthfulness and wholesomeness of all products bearing the inspection stamp.

In other words, the government will not put the stamp of its approval upon dairy products which are not pasteurized. This in itself would appear to be a sufficient answer for the dairy interests which are so bitterly opposing the movement for the Fed-

eral inspection of dairy products. They contend that Federal inspection is not necessary, that dairy products are healthful and clean, and that government supervision similar to that on meat products is not required.

But the government, through the Department of Agriculture, now puts itself squarely on record in this order as refusing to pass a product containing milk, cream or butter which has not been pasteurized. If oleomargarine containing these ingredients is not safe unless said ingredients have been pasteurized, how about the great volume of uninspected and unpasteurized butter and other dairy products which are offered to consumers all over the country?

If oleomargarine containing unpasteurized dairy products is refused recognition under the Federal law, why should butter and other dairy products which are made without any official supervision whatever as to their healthfulness and wholesomeness be allowed to flood the markets?

OPEN SEASON FOR PACKERS

This is the open season for packers. The hunt is now on, and may continue until Tuesday, November 7. After that the hunting will not be quite so good, though as a matter of fact there is no closed season on packers at any time of the year, especially for politicians and prospective office-holders.

Many a candidate has found the meat trade prolific in campaign material, and more than one office-holder has mended a badly dilapidated political fence by the simple expedient of tearing down a packinghouse or two. Other industries and other individuals may be the target of political abuse at one time or another, but the meat packer is a never-failing target for the political demagogue.

The customary and expected performances of various office-holders out for re-election has taken place in recent weeks. Various Congressmen have attacked the meat packers on various pretexts, and where new excuses could not be found, two or more of them have not hesitated to make use of the same pretext, ringing the changes on it as any well-trained political demagogue knows how to do.

Attacks on the meat packers because of meat prices, livestock prices, etc., are monotonously common and always expected. But while facetious persons have joked about blaming the packers for other public ills, it was hardly expected that a candidate for office would take up such a jest as a vote-catcher. The unexpected happened, however, when Congressman Rainey, of Illinois, in a speech in the House (copies to be franked to every voter of his district) accused the packers of being responsible for the rise in the price of bread.

Some particulars of this far-fetched politi-

cal expedient were set forth in the news columns of The National Provisioner. They were printed as indicating the lengths to which an office-seeker will go for campaign material. They cannot be considered seriously. They belong in the joke class.

RAILROAD STRIKE AVERTED

The threatened strike of railroad train operatives throughout the United States, set for Labor Day, September 4, did not take place, and a food supply crisis of more or less seriousness was thereby averted. The passage by Congress under pressure of an eight-hour law was the cause of calling off the strike order. Traffic was maintained with little interruption, slight delays being due to steps taken to embargo freight when a strike was in prospect.

Whether the eight-hour law, so-called, was a settlement of the difficulty, or only an incentive to court litigation and to further and more widespread labor difficulties, remains to be developed. The one thing that stands out and is admitted by all parties to the controversy is that the public will pay the cost of the dispute in increased freight charges and higher cost of commodities.

A fresh outbreak of labor difficulties appears to have followed the settlement of this particular crisis. Encouraged by the easy victory of the trainmen's unions labor organizers in many localities have either already called or are preparing to call fresh strikes. The near approach of a national election also appears to them a most opportune time for presenting their demands.

The packinghouse industry has been particularly free from these difficulties, except in the case of a certain class of labor in one or two localities. It is now reported, however, that labor union organizers are busy endeavoring to organize some classes of packinghouse employes in all the important centers, and have already prepared demands for increased wages and shorter hours which they will present when they think themselves sufficiently strong.

WILL BACK MEAT PRODUCTION

The Lake County Bankers' Association has been formed in Lake County, Fla., with nine bank members pledged to the moral and financial support of the farmers of the country, particularly of those who will take up stock farming and dairying. The organization was accomplished at a supper given at Leesburg by some of the bankers interested. An agreement was reached to finance the campaign, and five of the Lake County weekly papers have agreed to carry the advertising for the year at half the usual rates for large contracts. This is a practical method of stimulating meat production in the South which is worthy of emulation.

TRADE GLEANINGS

The plant of the Augusta Abattoir Co., Augusta, Ga., will be enlarged.

Slaughterhouse at Edgerton, Wis., belonging to Harry Hayward has been destroyed by fire.

The Ft. Wayne Rendering Company, Ft. Wayne, Ind., has increased its capital stock from \$10,000 to \$25,000.

The firm of Lutz & Pfluke has been organized in Utica, N. Y., to manufacture bologna and sausages of all kinds.

The plant of the Mansfield Cotton Oil Company, Mansfield, Ark., has been purchased by H. B. Godfrey, of Chicago, Ill.

The capital stock of the Lookout Oil & Refining Co., Chattanooga, Tenn., has been increased from \$125,000 to \$250,000.

The capital stock of the Farmers' Co-operative Packing Company, Madison, Wis., has been increased from \$500,000 to \$750,000.

The Massachusetts Pork Products Company, Amesbury, Mass., has purchased the Turkey Hill Farm at Newburyport, Mass.

It is reported that Armour & Company will move into their new building on Market street, Northampton, Mass., about the middle of this month.

A large stock of fertilizer and oils, machinery, etc., were destroyed when E. E. Frith's rendering and fertilizing establishment at Dubuque, Iowa, was burned.

R. A. Murray has been elected secretary of the Sioux City Stock Yards Company; of the Sioux City Terminal Railway Company, and secretary and treasurer of the Iowa Rendering Company.

Loading pens with a capacity of 1,000 head of cattle; including sorting pens, 10 acres

enclosure under fence and 15 car side track, to cost \$4,000, will be constructed by the Florida East Coast Railway Company, Okeechobee, Fla.

Fire of unknown origin destroyed feed and water sheds of the Cleveland Union Stockyards Company, West 65th street and the Big Four Railway, Cleveland, Ohio. Damage, \$25,000. Ten box cars on a side track next to the sheds were destroyed.

E. J. Lander, O. S. Hanson, Fred L. Goodman, A. I. Hunter, R. B. Griffith and M. F. Murphy are the incorporators of the Northern Packing Company, Grand Forks, N. D., and will establish a plant with a daily capacity of 500 hogs and 150 cattle and sheep, which will cost about \$500,000.

The plant of the Searcy Cotton Oil Co., Searcy, Ark., has been purchased by the Searcy Oil & Ice Co., recently incorporated with a capital stock of \$50,000, with the following officers: President, E. A. Robbins; vice president, H. W. Booth and secretary and manager, B. E. Eskridge.

The contract for the construction of the new Live Stock Exchange building at the Denver (Colo.) Union Stock Yards has been awarded. The new building will cost about \$150,000 when completed; fireproof, concrete and steel construction, and will be four stories high. It is expected that this building will be completed by January 1.

Worm & Co., pork and beef packers of Indianapolis, Ind., will pay a cash dividend of 6 per cent. for the fiscal year ending July 29, according to an announcement made at the annual meeting of stockholders. The members of the board of directors were all

re-elected to their former positions. They are: President, Albert R. Worm; vice president, David B. Darnell; secretary, Lyman S. Peterson and treasurer, Jonah E. Izor.

HOUSTON RATE DISCRIMINATION.

The Chamber of Commerce of Houston, Tex., has complained to the Interstate Commerce Commission of discrimination in rates for packinghouse products and lard substitutes by common carriers between points in Texas and Oklahoma. The complaint shows that the Atchison, Topeka & Santa Fe, Chicago, Rock Island & Gulf, Kansas City, Mexico and Orient, St. Louis & San Francisco, and thirty-two others, charge for carload lots to points in Oklahoma from points in Texas rates that are discriminatory under section 3 of the Act to regulate commerce in that the said rates exceed rates which the Interstate Commerce Commission prescribed for application between all points in Texas and Oklahoma. Also that the railways complained against charge Western classification rating of fifth class for the transportation of carload shipments of packinghouse products and lard substitutes, and that these rates range from 53c. per 100 to 74½c. per 100 pounds, and are therefore unreasonable under section 1 of the act to the extent that they exceed rates prescribed by the Interstate Commerce Commission. Also that these rates are in restraint of trade.

EGG MARKING ORDER DEAD LETTER.

It is reported that the order from New York State Department of Foods and Markets directing that all eggs kept in cold storage must, on and after September 1, be branded on the shell with the words "cold storage" or their equivalent, will remain in abeyance. The commissioner declines to rescind the order but has consented to take no steps for its enforcement if satisfied that egg distributors are complying with the general requirement of the cold storage law that cold stored eggs shall be so represented when sold. In other words, he has seen how foolish his order was, but his pride will not permit him to revoke it, so he will let it stand unenforced.

"TOM" WILSON ENTERTAINS EMPLOYEES.

Employees of Wilson & Company in Chicago were entertained on Labor Day by Thomas E. Wilson, president of the company, at his farm, "Edellyn," near Lake Forest. Motion pictures were taken of the day's events, which included athletic contests and an old-fashioned barbecue with whole roasted beefs. A horse show featuring Mr. Wilson's famous prize stallions was one of the attractions of the day. Another was a trap-shooting contest in which the host played a prominent part. It was a great day.

Bargains in equipment may be obtained by watching the "For Sale" department, page 48.

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PROVISIONS AND LARD

WEEKLY REVIEW

All articles under this head are quoted by the barrel, except lard, which is quoted by the hundredweight in tierces, pork and beef by the barrel or tierce and hogs by the hundredweight.

New High Levels—Trade Active—Demand Maintained—Product Shipments Large—Stocks Decreased—Hog Movement Moderate.

Provision values have reached new high levels during the past week, exceeding any prices made on both product and hogs in over 40 years, and the developments have been such that a great deal of confidence prevails as to the general outlook for distribution and prices. The demand has been excellent the past month, so that notwithstanding the high values there was a reduction in stocks. Taking all kinds of product, the reduction during the month was 31,000,000 pounds, compared with a reduction last year of 26,000,000 pounds. As prices for lard are 6½c. higher than last year, ribs in about the same amount and pork more than double last year, this distribution is surprising.

A study of quotations is very interesting. The value of lard a year ago was \$8.07 for the September delivery on Tuesday night, against \$14.55 this year, ribs \$8.05 against \$14.57 and pork \$12.07 against \$27.75. Quotations for hogs have not advanced anything in keeping with the advance in product. A year ago the price of hogs was about \$7 a 100, or only \$1 under the price of lard and ribs and about \$5 under the price of pork.

The price of hogs at present is nearly \$3 under the price of lard and ribs and about \$17 under the price of pork. The result of this great advance in product compared with the relatively moderate advance in hogs is to make for very much greater financial results in the cutting of hogs and curing of product than last year.

The comparison of prices for the season thus far and during the past month up-to-date shows the high and low price for the season and the month compared with last year.

	Season.		Aug. 1 to Sept. 7.	
	High.	Low.	High.	Low.
Pork, Sept.	\$27.80	\$20.12	\$27.80	\$24.30
Pork, Oct.	27.20	24.70	27.20	24.70
Pork, Jan.	27.85	22.00	24.85	24.85
Lard, Sept.	14.00	11.20	14.00	12.52
Lard, Oct.	14.57	12.55	14.57	12.55
Lard, Jan.	14.17	12.65	14.17	12.65
Ribs, Sept.	14.05	11.80	14.05	13.30
Ribs, Oct.	14.35	13.07	14.35	13.07
Ribs, Jan.	13.20	12.52	13.20	22.53

The high records were made this week.

The statement of product stock has been an important factor in the market. In view of the price it was anticipated that the shipments would be affected to some extent, although the weekly reports from packing centers have not indicated any such condition. Taking the season movement at Chicago and the shipments of cut meats have increased compared with last year 106,000,000 pounds, and shipments of lard have increased 79,000,-

000 pounds. The figures for the different kinds of stocks at Chicago during the month compared with July 31 this year and last year follow:

	1916	
	Aug. 31.	July 31.
Pork, new, bbls.	7,644	8,826
Pork, old, bbls.	1,415	1,567
Pork, other, bbls.	43,277	50,279
Lard, new, lbs.	51,479,747	64,071,390
Lard, old, lbs.	9,101,065	11,789,311
Short ribs, lbs.	9,785,148	14,561,132
Total meats, lbs.	110,147,015	124,411,536

Last year's figures were:

	1915	
	Aug. 31.	July 31.
Pork, new, bbls.	59,745	62,336
Pork, old, bbls.	3,108	3,784
Pork, other, bbls.	46,156	52,992
Lard, new, lbs.	93,419,550	96,236,000
Lard, old, lbs.	7,506,750	8,719,550
Short ribs, lbs.	40,499,095	40,024,911
Total meats, lbs.	152,438,717	172,586,573

The total stock of all products at Chicago is now 180,672,000 pounds against 211,800,000 pounds a month ago. Last year the total was 271,200,000 pounds against 297,231,000 pounds at the end of July. The total stock is now 91,000,000 pounds less than a year ago.

The movement of hogs is keeping up very well, but either the country is not satisfied with the price or else the supplies are not as large as anticipated, as the movement has not increased in the way anticipated in view of the price of hogs. During the past week the movement of all kinds of stock was naturally affected by the uncertainty regarding what might happen at Washington. With the signing of the eight-hour law the question of interruption of railway traffic

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has been settled and this week the movement of produce is beginning to be normal again. It is quite possible that the country is not pleased with the price of hogs and the price of product and is holding back on the selling of livestock hoping for prices more in keeping with the cured product. The packing during the week ending September 2 was 543,000 against 416,000 last week and 333,000 last year; February 26 to date indicated 14,711,000 against 13,467,000 last year.

The export movement continues very little. Shipments have maintained their lead over last year and the demand for product does not seem to be specially affected by the prices which have prevailed.

LARD.—The market has again advanced with prices up to new high levels. Demand is not active, but prices respond easily to moderate buying and stocks are firmly held. City is quoted at \$14.75; Western, \$14.80@14.90; Middle West, \$14.55@14.65; refined Continent, \$15.70; South American, \$16.20; Brazil, kegs, \$17.20; compound, \$11.37½@11.62½.

PORK.—The market continues very firm for all grades. Trade is light, but offerings are steadily absorbed and dealers are forced to replenish stocks at advancing prices. Mess, \$30@31; clear, \$27@29, and family, \$30@31.

BEEF.—The market shows further advance. Trade continues very quiet, but the arrivals are very light and stocks are so small that moderate orders affect values. Mess, \$20.50@21; packet, \$21@21.50; family, \$22.50@23; extra India, \$31@32.

SEE PAGE 29 FOR LATER MARKETS.

EXPORTS OF HOG PRODUCTS.

Exports of hog products from New York reported up to September 6, 1916:

BACON.—Brazil, 1,496 lbs.; British West Indies, 225 lbs.; Cuba, 114,040 lbs.; Dutch West Indies, 26 lbs.; England, 1,950,552 lbs.; France, 102,523 lbs.; Jamaica, 160 lbs.; Mexico, 109 lbs.; Newfoundland, 1,345 lbs.; Panama, 9,559 lbs.; Scotland, 244,315 lbs.; Venezuela, 200 lbs.

HAMS AND SHOULDERS.—British West Indies, 679 lbs.; Colombia, 871 lbs.; Cuba, 85,329 lbs.; Dutch West Indies, 454 lbs.; England, 1,735,253 lbs.; France, 54,064 lbs.; Haiti, 3,092 lbs.; Honduras, 410 lbs.; Jamaica, 7,380 lbs.; Mexico, 645 lbs.; Newfoundland, 409 lbs.; Panama, 6,836 lbs.; San Domingo, 3,117 lbs.; Scotland, 122,481 lbs.; Venezuela, 10,487 lbs.

LARD.—Brazil, 200 lbs.; British West Indies, 2,340 lbs.; Colombia, 7,468 lbs.; Cuba, 62,754 lbs.; Dutch West Indies, 100 lbs.;

Ecuador, 2,093 lbs.; England, 947,238 lbs.; France, 52,500 lbs.; Haiti, 22,192 lbs.; Italy, 5,500 lbs.; Jamaica, 900 lbs.; Mexico, 14,270 lbs.; Panama, 7,480 lbs.; Philippine Islands, 4,861 lbs.; San Domingo, 58,390 lbs.; Scotland, 25,425 lbs.; Sweden, 102,750 lbs.; Venezuela, 142,587 lbs.

LARD COMPOUND.—British West Indies, 12,025 lbs.; China, 100 lbs.; Cuba, 117,098 lbs.; Dutch West Indies, 9,385 lbs.; England, 34,316 lbs.; Haiti, 19,091 lbs.; Jamaica, 9,800 lbs.; Newfoundland, 2,567 lbs.; San Domingo, 2,281 lbs.; Scotland, 138,445 lbs.; Venezuela, 400 lbs.

LARD OIL.—Italy, 2,000 gals.; New Zealand, 125 gals.

FRESH PORK.—British West Indies, 89 lbs.; Panama, 8,703 lbs.

PICKLED PORK.—British West Indies, 8,200 lbs.; Canada, 1,800 lbs.; Cuba, 48,259 lbs.; Dutch West Indies, 200 lbs.; England, 80,000 lbs.; Haiti, 21,500 lbs.; Jamaica, 19,300 lbs.; Newfoundland, 80,000 lbs.; Panama, 7,000 lbs.; San Domingo, 7,900 lbs.; Venezuela, 109 lbs.

CANNED PORK.—Australia, 6,000 lbs.; British West Indies, 36 lbs.; England, 21,400 lbs.; Panama, 310 lbs.; San Domingo, 24 lbs.; Scotland, 3,600 lbs.; Straits Settlements, 648 lbs.

SAUSAGE.—British West Indies, 120 lbs.; Colombia, 143 lbs.; Cuba, 2,548 lbs.; Dutch West Indies, 922 lbs.; England, 3,360 lbs.; France, 222,220 lbs.; Haiti, 1,975 lbs.; Newfoundland, 3,120 lbs.; Panama, 10,440 lbs.; Philippine Islands, 500 lbs.; San Domingo, 7,658 lbs.; Straits Settlements, 960 lbs.; Trinidad, Island of, 10 lbs.; Venezuela, 1,426 lbs.

EXPORTS OF BEEF PRODUCTS.

Exports of beef products from New York reported up to September 6, 1916:

CATTLE.—Bermuda, 40 hd.; British West Indies, 1 hd.; Venezuela, 1 hd.

BEEF, PICKLED AND OTHER CURED.—British West Indies, 2,900 lbs.; Cuba, 1,970 lbs.; Jamaica, 7,740 lbs.; Mexico, 480 lbs.; Panama, 2,500 lbs.; San Domingo, 200 lbs.; Scotland, 30,400 lbs.; Trinidad, Island of, 3,000 lbs.; Venezuela, 200 lbs.

FRESH BEEF.—British West Indies, 752 lbs.; England, 602,296 lbs.

OLEOMARGARINE.—British West Indies, 500 lbs.; Colombia, 468 lbs.; Hongkong, 13,386 lbs.; Jamaica, 200 lbs.; Panama, 1,120 lbs.

OLEO OIL.—Cuba, 9,603 lbs.; Denmark, 121,932 lbs.; Greece, 58,988 lbs.; Scotland, 57,844 lbs.; Sweden, 64,782 lbs.

STEARINE.—Costa Rica, 6,660 lbs.; England, 44,111 lbs.; France, 12,106 lbs.; Guatemala, 5,000 lbs.; Philippine Island, 1,890 lbs.

OTHER ANIMAL OILS.—England, 2,000

gals.; Netherlands, 100 gals.; Scotland, 100 gals.

TALLOW.—British West Indies, 200 lbs.; Colombia, 2,000 lbs.; Cuba, 117,036 lbs.; Italy, 34,576 lbs.; San Domingo, 25,699 lbs.

CANNED MEATS (Value).—Brazil, \$11; British Honduras, \$42; British India, \$789; British West Indies, \$48; Colombia, \$77; Costa Rica, \$117; Cuba, \$507; Dutch East Indies, \$460; Dutch West Indies, \$68; Ecuador, \$25; Egypt, \$6; England, \$14,579; Guatemala, \$7; Haiti, \$34; Hongkong, \$108; Italy, \$2,250; Jamaica, \$513; Mexico, \$977; Newfoundland, \$1,004; Nicaragua, \$69; Panama, \$756; Philippine Islands, \$30; San Domingo, \$449; Scotland, \$11,139; Straits Settlements, \$701; Trinidad, Island of, \$26; Venezuela, \$152.

OTHER MEAT PRODUCTS (Value).—Brazil, \$2; British Honduras, \$19; Costa Rica, \$93; Cuba, \$189; Denmark, \$312; Dutch West Indies, \$632; Ecuador, \$11; England, \$7,974; France, \$4,285; Haiti, \$82; Jamaica, \$212; Mexico, \$145; Newfoundland, \$2,740; Panama, \$3,497; San Domingo, \$15; Trinidad, Island of, \$45; Venezuela, \$380.

FOREIGN COMMERCIAL EXCHANGE.

New York, September 8.—Foreign commercial exchange rates, as far as quoted, are:

London—	
Bankers' 60 days.....	4.71½
Cable transfers.....	4.76½
Demand sterling.....	4.75½
Commercial bills, sight.....	4.75½
Commercial, 60 days.....	4.70½
Commercial, 90 days.....	4.68½
Paris—	
Commercial, 90 days.....	No quotations.
Commercial, 60 days.....	No quotations.
Commercial, sight.....	5.85½
Bankers' cables.....	5.87½
Bankers' checks.....	5.88½
Berlin—	
Commercial, sight.....	No quotations.
Bankers' sight.....	69½
Bankers' cables.....	69½
Antwerp—	
Commercial, 60 days.....	No quotations.
Bankers' sight.....	No quotations.
Bankers' cables.....	No quotations.
Amsterdam—	
Commercial, sight.....	40½
Commercial, 60 days.....	40½
Bankers' sight.....	40½
Copenhagen—	
Checks.....	27.30

EXPORTS OF PROVISIONS

Exports of hog products for the week ending Sept. 2, 1916, with comparisons:

To—	PORK, BBLs.		
	Week ending Sept. 2, 1916.	Week ending Sept. 4, 1915.	From Nov. 1, '15, to Sept. 2, 1916.
United Kingdom.....	70	242	12,192
Continent.....	75	350	4,409
So. & Cen. Am.....	435	100	18,727
West Indies.....	2,116	1,072	44,274
Br. No. Am. Col.....	410	.....	14,922
Other countries.....	9	18	875
Total.....	3,115	1,782	95,399

To—	MEATS, LBS.		
	Week ending Sept. 2, 1916.	Week ending Sept. 4, 1915.	From Nov. 1, '15, to Sept. 2, 1916.
United Kingdom.....	11,612,225	5,343,415	520,520,822
Continent.....	3,071,521	3,637,875	162,090,135
So. & Cen. Am.....	20,381	4,030	2,719,828
West Indies.....	181,673	197,802	9,763,113
Br. No. Am. Col.....	1,754	3,600	722,161
Other countries.....	20,365	12,180	687,213
Total.....	14,907,919	9,198,902	716,503,272

To—	LARD, LBS.		
	Week ending Sept. 2, 1916.	Week ending Sept. 4, 1915.	From Nov. 1, '15, to Sept. 2, 1916.
United Kingdom.....	2,886,760	3,349,490	227,064,792
Continent.....	4,969,615	921,750	155,771,047
So. & Cen. Am.....	472,455	798,062	32,737,364
West Indies.....	567,640	682,150	23,362,754
Br. No. Am. Col.....	.....	152,568	585,619
Other countries.....	60	81,029	1,960,732
Total.....	8,896,530	5,985,049	441,482,308

RECAPITULATION OF THE WEEK'S EXPORTS.			
From—	Pork, bbls.	Meats, lbs.	Lard, lbs.
New York.....	2,655	8,562,644	7,313,530
Boston.....	10	772,275	.....
New Orleans.....	450	.....	800,000
Montreal.....	.....	5,573,000	783,000
Total week.....	3,115	14,907,919	8,896,530
Previous week.....	1,405	15,135,871	9,036,745
Two weeks ago.....	2,103	11,080,014	4,264,696
Cor. week last y'r.....	1,782	9,198,902	5,985,049

COMPARATIVE SUMMARY OF EXPORTS.

From Nov. 1, '15, Same time to Sept. 2, '16, last year.			
Pork, lbs.	Meats, lbs.	Lard, lbs.	Increase.
19,079,500	16,944,800	2,135,000	
716,503,272	659,204,273	57,298,989	
441,482,308	423,515,262	17,967,076	

EXPORTS SHOWN BY STEAMERS.

Exports of commodities from New York to European ports for the week ending Thursday, August 31, 1916, as shown by A. L. Russell's report are as follows:

Steamer and Destination.	Oil		Cottonseed		Rice and		Tallow		Beef		Pork		Lard	
	Cake.	Bags.	Oil.	Bbls.	Butter.	Hams.	Pkgs.	Boxes.	Pkgs.	Pkgs.	Bbls.	Tes.	Pkgs.	Pkgs.
Lord Cromer, Liverpool.....	706	.....	.....	.....	.....	410	.....	.....	.....	.....	.....	561	.....	500
Saxonia, Liverpool.....	.....	.....	.....	2524	.....	2118	.....	.....	.....	.....	.....	246	.....	1750
St. Paul, Liverpool.....	.....	.....	.....	1054	.....	3147	.....	.....	.....	.....	.....	176	.....	.....
Saint George, Liverpool.....	2811	.....	.....	.....	.....	306	.....	.....	.....	.....	.....	.....	.....	.....
Baltic, Liverpool.....	.....	.....	.....	.....	.....	3537	.....	.....	.....	.....	70	.....	.....	.....
Manchuria, London.....	.....	.....	.....	1024	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minnehaha, London.....	.....	.....	.....	7694	.....	337	.....	.....	.....	.....	50	.....	.....	825
Lancastrian, London.....	.....	.....	.....	596	.....	346	.....	.....	.....	.....	.....	.....	.....	.....
California, Glasgow.....	111	.....	.....	.....	.....	726	.....	.....	.....	162	.....	250	.....	.....
Norma, Copenhagen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Texas, Copenhagen.....	8722	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hellig Olav, Copenhagen.....	10071	.....	.....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....
Saga, Esbjerg (Den.).....	22029	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kristianfjord, Bergen.....	.....	.....	.....	.....	.....	400	.....	.....	.....	690	175	225	.....	.....
Nieuw Amsterdam, Rotterdam.....	6960	1850	.....	.....	.....	.....	.....	.....	.....	.....	360	1520	.....	.....
Ubier, Rotterdam.....	.....	.....	.....	.....	.....	4375	.....	.....	.....	.....	11770	.....	.....	.....
Trompenberg, Rotterdam.....	15400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fauna, Amsterdam.....	29256	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lennox, Bordeaux.....	3935	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Modiva, Bordeaux.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75	.....	.....	.....
Calabria, Genoa.....	.....	.....	.....	.....	.....	45	.....	.....	.....	.....	.....	.....	.....	25
Canopic, Genoa.....	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	.....	.....	.....	25
Total.....	100001	1850	12892	15967	575	902	320	13638	4645	.....	.....	.....	.....	.....

TALLOW, STEARINE, GREASE and SOAP

WEEKLY REVIEW

TALLOW.—The undertone to the market continues quite firm and higher prices have been paid during the past week. Sales of city special tallow at 8½c. loose have been reported and the 9c. level is predicted for the near future. Some authorities say that buyers are becoming educated to the higher prices and this sentiment alone will go a long way toward holding the market.

The actual buying has been of a little broader character, but the better grades of tallow have benefited most. Western markets seem to be relatively firm.

There is evidence of more interest being given to foreign oils, especially as some coconut oil was offered at the Pacific coast not very much above a basis with tallow. On the other hand there is less heard of South American tallow being offered here and the slackening of these offerings is taken to more than offset the absence of export demand for domestic tallows.

A somewhat firmer tone in the glycerine market has been reported, but this has not been very effective in strengthening tallows. General ideas as to the political situation in Europe are very much mixed.

Prime city tallow in the local market is quoted at 8½c. nominal and city specials at 8¾c. loose.

OLEO STEARINE.—The market has been firm, with sales reported as high as 12c. Rather steady absorption for compound lard makers and export buying has served to advance values.

OLEO OIL.—The market is nominally firm, but quiet. Export trade is very light. Extras are quoted at 14c. and medium at 12½@13c.

SEE PAGE 29 FOR LATER MARKETS.

PALM OIL.—The volume of business is quiet, with values slightly easier. Demand is limited and the trade is slow to pay the high prices. Prime red, spot, 8¾@9c.; Lagos, spot, 9@9½c.; to arrive, —; palm kernel, 12½@13c.

PEANUT OIL.—The market is very steady with a light jobbing trade. Prices are quoted at 70@80c.

CORN OIL.—The market is firm with limited supplies available. Trade is not active, but demand is quite steady and prices show response to demand. Prices at 8½@8¾c.

SOYA BEAN OIL.—The market is firm, but quiet. The general strength of other oils has a good deal of influence and consumption is fairly good. Spot is quoted at 8½@8¾c.

NEATSFOOT OIL.—The market was again quiet but steady. For 20 cold test, 103@105; 30 do., 97@100; water white, 98.

COCOANUT OIL.—The market is quiet, with prices slightly easier. There appears to be an absence of interest. Prices are high and the trade is cautious. Ceylon, 12½@13c.; Cochin, 14@14½c.

GREASES.—The market continues firm. Demand is not active, but the strength of competing fats is forcing value higher. Yellow, 7½@7¾c. nom.; bone, 7½@7¾c. nom.; house, 7½@7¾c.

FRESH MEAT AND OFFAL IMPORTS.

Imports of foreign beef into the port of New York during the past week totaled nothing, compared to 4,120 quarters last week and 34,332 quarters for export two weeks ago. Mutton imports totaled nothing, compared to 5,000 carcasses of lambs for export last week. There were no arrivals of any kind.

ARGENTINE BEEF EXPORTS.

Cable reports of Argentine exports of beef for the week up to September 8, 1916, show that exports from that country were as follows: To England, 128,184 quarters; to the Continent, 46,273 quarters; to the United States, none. The previous week's exports were as follows: To England, 90,145 quarters; to the Continent, 19,616 quarters; to the United States, none.

IMPORTS OF FRESH BEEF.

For the week ending September 2, 1916, the Government reports imports of fresh beef at the port of New York amounting to 826,561 pounds, the average value, according to estimates from the manifests, being 9 cents per pound. The previous week's imports totaled 124,941 pounds and averaged 12½ cents per pound.

OCEAN FREIGHTS.

(Subject to change. Quotations given are shillings per ton and cents per 100 lbs.)

	Liver- pool.	Glas- gow.	Rotter- dam.	Copen- hagen.
Beef, tierces	\$1.75	\$1.75	250c.	250c.
Pork, barrels	1.75	1.75	250c.	250c.
Bacon	1.75	1.75	250c.	250c.
Canned meats	1.75	1.75	250c.	250c.
Lard tierces	1.75	1.75	250c.	250c.
Tallow	1.75	1.75	250c.	250c.
Cottonseed oil	7.00	10.00	250c.	250c.
Oil Cake	.80	.80	175c.	180c.
Butter	1.50	1.50	300c.	300c.

No rates to Hamburg.

GREEN AND SWEET PICKLED MEATS.

(Special Report to The National Provisioner from The Davidson Commission Co.)

Chicago, September 7.—Quotations on green and sweet pickled meats, f. o. b. Chicago, loose, are as follows:

Regular Hams.—Green, 8@10 lbs. ave., 17c.; 10@12 lbs. ave., 17c.; 12@14 lbs. ave., 17c.; 14@16 lbs. ave., 17½c.; 18@20 lbs. ave., 17½c. Sweet pickled, 8@10 lbs. ave., 16¾@17c.; 10@12 lbs. ave., 16¾@17c.; 12@14 lbs. ave., 16¾@17c.; 14@16 lbs. ave., 17@17½c.; 18@20 lbs. ave., 17¼@17½c.

Skinned Hams.—Green, 14@16 lbs. ave., 18½c.; 16@18 lbs. ave., 18½c.; 18@20 lbs. ave., 18½c. Sweet pickled, 14@16 lbs. ave., 18c.; 16@18 lbs. ave., 18¼c.; 18@20 lbs. ave., 18½c.; 22@24 lbs. ave., 18c.

Picnic Hams.—Green, 5@6 lbs. ave., 12½c.; 6@8 lbs. ave., 12½c.; 8@10 lbs. ave., 12½c.; 10@12 lbs. ave., 12½c. Sweet pickled, 5@6 lbs. ave., 12½c.; 6@8 lbs. ave., 12c.; 8@10 lbs. ave., 11¾@12c.; 10@12 lbs. ave., 11¾@12c.

Clear Bellies.—Green, 6@8 lbs. ave., 18c.; 8@10 lbs. ave., 17¾c.; 10@12 lbs. ave., 17¾c.; 12@14 lbs. ave., 16¾c.; 14@16 lbs. ave., 16¾c. Sweet pickled, 6@8 lbs. ave., 16¾c.; 8@10 lbs. ave., 16¾c.; 10@12 lbs. ave., 16¾c.; 12@14 lbs. ave., 16c.; 14@16 lbs. ave., 15¾c.

PORK CUTS IN NEW YORK.

(Special Report to The National Provisioner from H. O. Zaun.)

New York, September 7.—Wholesale prices on green and sweet pickled pork cuts in New York City are reported as follows: Pork loins, 24@25c.; green hams, 8@10 lbs. ave., 19c.; 10@12 lbs. ave., 19c.; 12@14 lbs. ave., 19c.; 18@20 lbs. ave., 18½c.; green clear bellies, 6@10 lbs. ave., 18c.; 10@12 lbs. ave., 17½c.; 12@14 lbs. ave., 17c.; green rib bellies, 10@12 lbs. ave., 17c.; 12@14 lbs. ave., 17c.; S. P. clear bellies, 6@8 lbs. ave., 17c.; 8@10 lbs. ave., 17½c.; 10@12 lbs. ave., 17c.; 12@14 lbs. ave., 16½c.; S. P. rib bellies, 10@12 lbs. ave., 16½c.; 12@14 lbs. ave., 16c.; S. P. hams, 8@10 lbs. ave., 18c.; 10@12 lbs. ave., 18c.; 18@20 lbs. ave., 19½c.; city steam lard, 14¾@14¾c.; city dressed hogs, 15¾c.

Western prices on green cuts are as follows: Pork loins, 8@10 lbs. ave., 20@21c.; 10@12 lbs. ave., 19@20c.; 12@14 lbs. ave., 18@19c.; 14@16 lbs. ave., 17@18c.; skinned shoulders, 14@14½c.; boneless butts, 18c.; Boston butts, 16c.; neck ribs, 3@4c.; spare ribs, 10½c.; lean trimmings, 15c.; regular trimmings, 10½c.; kidneys, 6c.; tails, 6@7c.; livers, 2@3c.; snouts, 4½c.; pig tongues, 13c.

WELCH, HOLME & CLARK CO.

Office and Warehouse

383 West Street

New York City

CAUSTIC SODA

SODA ASH

COCOANUT OIL

PALM OIL

TALLOW

GREASE

STEARINE

COTTONSEED OIL EXPORTS

Exports of cottonseed oil reported for the week ending September 7, 1916, were:

	Week ending Sept. 7, 1916.	Bbls.
From New York—		
Australia	37	
Central America	5	
Cuba	417	
Haiti	3	
Netherlands	3,067	
San Domingo	26	
South America	1,394	
West Indies, Other	34	
Total	4,893	
From New Orleans—		
Mexico	15	
Total	15	
	Week ending Sept. 7, 1916.	Same period, 1914.
Recapitulation—	Bbls.	Bbls.
From New York	4,893	16,565
From New Orleans	15	3,135
Total	4,908	19,700

COTTONSEED OIL SITUATION.

(Special Letter to The National Provisioner from Aspegren & Co.)

New York, September 7, 1916.—The market during the past week was extremely active, as to volume of trading as well as fluctuations. Buying influenced by the strong lard and cotton markets advanced values in leaps and bounds. From the low levels the extreme advance of 74 points was scored in the March delivery. Fluctuations during a session of 15 to 30 points were not uncommon. The bulk of the buying was principally for outside accounts. From the high prices of the 5th the declining cotton and lard market caused recent buyers to attempt to unload, and this selling carried the market down again to very near last week's close.

Surprising to relate, notwithstanding the strong pure lard situation no new buying of cotton oil of consequence was reported by the compound lard manufacturers, although the trade in compound lard is reported as good. This would indicate that stocks in manufacturers' hands are liberal. This latter fact is being reflected to some extent in the nearby deliveries in the New York market. The nearby deliveries only a short while ago were commanding heavy premiums, whereas now the September delivery is instead selling at a heavy discount and can only indicate a slow consuming trade.

The crude oil markets have been dormant for some time. The past two days, however, some interest is again being shown by the mills, although sales reported are still extremely light for this time of the season.

The market at the close of the week looks easy. The fact that the consuming trade seems able still to hold out has proven more or less disappointing to the believers in higher prices. And with the lard and cotton market, particularly the latter, beginning to give way, these holders of oil contracts are showing signs of uneasiness. While it is true that cotton oil prices look cheap in comparison to the price of pure lard, still the fact remains that the consuming trade seems well supplied with old contracts and shows but little interest in quotations. Another feature not to be overlooked is the fact that the

future sales of new crop crude oil are probably the lightest in years, and pressure from this direction will probably be felt very shortly.

	Close Aug. 31.				Close Sept. 7.	
	Bid.	Asked.	High.	Low.	Bid.	Asked.
Sept.	9.61	9.64	10.13	9.49	9.90	9.95
Oct.	9.96	9.98	10.39	9.94	10.10	10.13
Nov.	9.88	9.89	10.40	9.82	10.01	10.04
Dec.	9.91	9.92	10.42	9.79	10.06	10.07
Jan.	9.91	9.94	10.52	9.84	10.11	10.12
Mar.	10.15	10.20	10.84	10.10	10.33	10.35

COTTON OIL IN LATIN-AMERICA.

In reporting on the cotton oil trade in Costa Rica Consul C. Donaldson writes that the quantity of cottonseed oil consumed per annum in the Port Limon district gives the best proof that there is no strong prejudice against its use. To the contrary, the working people, both white and black, composing over 90 per cent. of the population, use no other table or cooking oil. The other 10 per cent., composed of natives and white foreigners, use it for cooking, but use olive oil for the table. In fact, it might be safely stated that every house in this district uses cottonseed oil for some purpose. The seven principal importers of cottonseed oil in the district receive about 37,200 gallons per annum. The duty on refined cottonseed oil is \$0.042 per pound, and on crude cottonseed oil \$0.006 per pound.

Consul Samuel T. Lee of San Jose writes that American cottonseed oil has been well and favorably known in this market for years, and is used extensively as an article of food. It is sold under its correct name and is used mostly for cooking. A considerable amount is used for floating-wick lamps by the churches and the poorer people. There are no official statistics covering amounts imported, for the reason that until now the statistical office has combined entries of this article with industrial oils. However, a leading importer estimates the consumption to be 60,000 gallons per year for the entire country, which has some 400,000 inhabitants. Many native families never use lard for cooking and prefer cottonseed oil for this purpose.

The following information has been secured by Consul R. M. Bartleman from local importers regarding the market for cottonseed oil in the Cienfuegos district of Cuba:

Olive oil is preferred to cottonseed oil even at a slight increase of cost. It can hardly be claimed there is a prejudice against the latter; rather a preference for the former, and while it may be fostered by its long and accustomed use, there seems to be a settled belief in its superiority. However, it is an understood fact among the trade that when the price of cottonseed oil is well below that of olive oil the two are mixed and sold as olive. At present prices are about equal, notwithstanding the preferential duty in favor of the United States, and the writer is informed there is little importation of the cottonseed oil for that reason. Imports for the calendar year 1915 were: Cottonseed oil, 2,150 cases; olive oil, 8,133 cases.

PEANUT MEAL IN PORK MAKING.

In a communication to the Breeders' Gazette of Chicago on the value of peanut meal in pork production, Prof. S. R. Winters, of North Carolina, says: To determine the relative value of wheat shorts, waste peanuts and peanutmeal as rations for pork production has been the object of a test completed by the North Carolina Experiment Station.

The nutritive value of hitherto unused products of the abandoned peanut field was conclusively proved. The lot of peanut-fed pork brought \$10.30 per cwt. on the Baltimore market, a price exceeded by only one other lot of hogs.

Comparative experimental data were obtained from the fattening of 32 pigs for 149 days. The pigs were divided into three lots. Lot No. 1 was fed two-thirds corn and one-third wheat shorts; Lot No. 2 two-thirds corn and one-third waste peanuts; Lot No. 3 two-thirds corn and one-third peanutmeal. Pigs fed on the ration of wheat shorts gained .7 of a pound per pig each day. The hogs subsisting on tainted peanuts and peanutmeal made a daily gain of .8 of a pound.

The profitable returns from the peanut-fed pork were established in the column of comparative costs of feed values. Corn was valued at \$1 a bushel, waste peanuts at 75c. a bushel, peanutmeal at \$30 a ton and wheat shorts at \$30 a ton. This calculation indicates that wheat shorts was the most expensive feed used. As a supplementary feed with corn, for 100 pounds of pork \$10.35 was expended. Damaged peanuts produced 100 pounds of pork for \$9.83 and peanutmeal reduced the cost to \$8.81 per cwt.

The test not only suggests a cheap and economical feedstuff for pork production, but the utilization of a by-product that will enhance hog raising in the peanut-yielding areas. Heretofore tainted and weathered peanuts have been permitted to waste in the fields.

CHEMICALS AND SOAP SUPPLIES.

(Special Report to The National Provisioner.)

New York, September 7, 1916.—Quotations on chemicals and soapmakers' supplies are as follows: 74@76 per cent. caustic soda, 3¼c. per lb.; 60 per cent. caustic soda, 3¼c. per lb.; 98 per cent. powdered caustic soda, 4½@4¾c. per lb.; 48 per cent. bicarbonate of soda, 2¾c. per lb.; talc, 1½c.@1¾c. per lb.; 58 per cent. soda ash, 3¼@3½c. per lb.; chloride of lime in bbls., 5@5½c. per lb.; chloride of lime in casks, 4½@5c. per lb.; sillex, 2,000 lbs., \$15@20 per ton.

Prime palm oil, 9c. per lb.; clarified palm oil in bbls., 10½c. per lb.; genuine Lagos palm oil in casks, 9½c. per lb.; palm kernel oil, 12@13c. per lb.; yellow olive oil, 95@96c. per lb.; green olive oil, 93c. per gal.; Ceylon coconut oil, 12½@13c. per lb.; Cochin coconut oil, 14@15c. per lb.; green olive oil foots, 9½@10c. per lb.; cotton oil, 10½@10¾c. per lb.; soya bean oil, 8¼@8½c. per lb.; corn oil, 8½@8¾c. per lb.; peanut oil, soapmakers, 5 per cent. acidity, 75@80c. per gal.

Prime city tallow, 8c. per lb.; house grease, 7½@7¾c. per lb.; oleo stearine, 11@12c. per lb.; brown grease, 7@7¼c. per lb.; yellow packers' grease, 7¼@8c. per lb.; dynamite glycerine, 40c. per lb.; saponified glycerine, 33½c. per lb.; crude soap lye glycerine, 30c. per lb.; chemically pure glycerine, 40c. per lb.

EXPORTS OF COTTONSEED OIL.

Official government estimates of exports of cottonseed oil for the month of July total 13,394 bbls., compared to 52,613 bbls. in July, 1915. Exports for the season from September 1, 1915, as estimated by this same authority, total 676,427 bbls., compared to 852,729 bbls. for a like period a year ago.

COTTONSEED OIL

WEEKLY REVIEW

THE NATIONAL PROVISIONER is official Organ of the Interstate Cottonseed Crushers' Association, the Texas Cottonseed Crushers' Association, South Carolina Cottonseed Crushers' Association, the Georgia Cottonseed Crushers' Association, and the Mississippi Cottonseed Crushers' Association.

Irregular Markets—High Prices Maintained Fairly Well—Speculative Interest Does Not Subside—Big Advances in Crude Oil and Seed—Movement of New Crude Oil Increasing—Consuming Reports Conflict—Slow Export Trade.

Authorities in the cotton oil trade confess that they have not been so much astonished by the great advance in cottonseed oil, but rather by the maintenance of cotton oil values at near the high prices established and the extent of the outside dealings in the market. It is evident that the power of speculation has been greater than calculated and also far-reaching. The active buying of cotton oil contracts has been influential in encouraging farmers to hold their seed for higher prices, while the great strength in the cotton market has also contributed toward this tendency.

There have been claims that seed has sold for close to \$50 a ton. Of course, lower prices have also been mentioned and the average of the recent business is believed to be moderately under the price quoted here. While \$50 does not represent a new high record, higher prices having been paid several months ago, such a level at this sea-

son of the year does make a new mark in the cotton oil trade.

From the present indications there will be somewhat more seed available than was the case last year. In tons, the amount might be estimated at 400,000. Those who are interested in selling seed contend that the quantity of seed is not the only factor to be considered, the levels of the by-products are also a governing factor. Whether the present levels for cottonseed will be held is largely a matter of opinion. The general impression is that when the movement becomes freer and particularly if the cotton crop suffers no further deterioration, escaping frost, etc., that prices will ease somewhat.

It is obvious that crude oil mills cannot sell crude oil freely until the seed question is clearer. Recent business in new oil has not been of large proportions. Values have been naturally advanced to conform with the big upturns in the contract market, and there has been much irregularity in quotations. The different prices named in adjacent sections were not surprising, however, as 1c. a gallon in these days of excitement, is not to be fought over.

Actual weather conditions through the South have been improved on the whole. There have been no rains in Texas, but the State will be best off, according to experts, by clear, favorable picking weather. Many parts of Oklahoma have received beneficial showers, although more are required. Some

rains in the eastern cotton States have not been undesired. The great uncertainty now is the probable frost date, even though the top crop prospects this year are viewed unfavorably as a whole.

The first ginning report of the season was issued on Friday. The trade had expected a showing of about 600,000 bales as compared with 414,000 last year. It is well realized that ginning reports are of no value in measuring the size of the crop excepting when the figures pertain to the ginnings of a major part of a season.

The bullish sentiment in the cotton oil market at this time is led by the West, with the South a close second. Advances in lard have been a great aid to those favoring high cotton oil prices, as it is known that the maintenance of the high prices for cotton oil depend largely upon the maintenance of lard. Some of the westerners have stored a little oil at New York, but it is not thought that storing of oil will assume large proportions at this period of this season. The general reports as to the absorption of cotton oil for consumers are much mixed; it is conceded that the best absorption is for compound lard makers, butter making concerns, and of salad oil users. Export trade is still slow.

Closing prices, Saturday, Sept. 2, 1916.—Spot, \$9.65; September, \$9.70@9.85; October, \$10.04@10.07; November, \$9.95@10; December, \$9.95@9.97; January, \$10.02@10.04; February, \$10.10@10.25; March, \$10.39@10.45; April, \$10.45@10.60. Futures closed 10 to 30 higher. Sales were: October, 2,900.

The
American
Cotton
Oil Co.



27 BEAVER STREET
NEW YORK CITY

Cable Address:
"AMCOTOIL," New York

**Cottonseed
Products**

**OIL, LINTERS
CAKE, ASHES
MEAL, HULLS**

**GOLD MEDALS
AWARDED**

Chicago, 1893.
San Francisco, 1894.
Atlanta, 1895.
Paris, 1900. Buffalo, 1901.
Charleston, S. C., 1902.
St. Louis, 1904.

\$10.05@9.97; November, 300, \$9.94@9.85; December, 4,100, \$10@9.83; January, 3,800, \$10.07@9.84; March, 1,600, \$10.42@10.20. Total sales, 12,700 bbls. Prime crude, S. E., new, \$8.53 nom.; prime crude, Valley, nom.; prime crude, Texas, nom.

Monday, September 4, 1916.—Holiday.

Closing prices, Tuesday, September 5, 1916.—Spot \$10; September, \$10@10.25; October, \$10.30@10.36; November, \$10.24@10.25; December, \$10.33@10.34; January, \$10.41@10.42; February, \$10.45@10.48; March, \$10.67@10.69; April, \$10.70@10.80. Futures closed 25 to 39 higher. Sales were: September, 300, \$10.05@10; October, 2,500, \$10.35@10.20; November, 5,200, \$10.40@10.10; December, 11,800, \$10.42@10.17; January, 21,600, \$10.52@10.26; February, 1,300, \$10.51@10.44; March, 9,200, \$10.84@10.57. Total sales, 51,900 bbls. Prime crude, S. E. New, \$8.53 nom.; prime crude, Valley, nom.; prime crude, Texas, nom.

Closing prices, Wednesday, September 6, 1916.—Spot, \$10.10; September, \$10.13@10.35; October, \$10.35@10.40; November, \$10.29@10.30; December, \$10.30@10.31; January, \$10.33@10.35; February, \$10.40@10.42; March, \$10.56@10.57; April, \$10.60@10.70. Futures closed 13 higher to 11 lower. Sales were: October, 600, \$10.39@10.30; November, 4,200, \$10.35@10.15; December, 6,100, \$10.35@10.17; January, 11,200, \$10.35@10.20; March, 12,400, \$10.60@10.43. Total sales, 34,500 bbls. Prime crude S. E. New, \$9.07 nom.; prime crude, Valley, nom.; prime crude, Texas, nom.

Closing prices, Thursday, September 7, 1916.—Spot, \$9.80; September, \$9.90@9.95; October, \$10.10@10.13; November, \$10.01@10.04; December, \$10.06@10.07; January, \$10.11@10.12; February, \$10.15@10.20; March, \$10.33@10.35; April, \$10.35@10.50. Futures closed 22 to 28 lower. Sales were: September, 400, \$10@9.88; October, 5,300, \$10.25@10.10; November, 3,900, \$10.08@9.93; December, 12,000, \$10.12@9.94; January, 14,200, \$10.16@9.93; March, 16,900, \$10.37@10.19. Total sales, 52,700 bbls. Prime crude, S. E. New, \$9.07, nom.; prime crude, Valley, nom.; prime crude, Texas, nom.

SEE PAGE 29 FOR LATER MARKETS.

SOUTHERN MARKETS

Atlanta.

(Special Wire to The National Provisioner.)

Atlanta, Ga., September 7, 1916.—Trading in crude cottonseed oil is extremely dull at 66c. bid. Meal firm at \$32@33 for 7 per cent. prime. Hulls, \$11.50@12.50, loose, f. o. b. mills.

Memphis.

(Special Wire to The National Provisioner.)

Memphis, Tenn., September 7, 1916.—Prime crude cottonseed oil 68½¢@69¢. Prime 7½ per cent. meal, \$31.50@32. Hulls, \$10 loose, \$12.50 sacked. Linters, 6½¢c. for clean mill run.

New Orleans.

(Special Wire to The National Provisioner.)

New Orleans, La., September 7, 1916.—Prime crude cottonseed oil, 66½¢c. bid; 67@68c. asked; offerings light, as only a limited number of mills are running. Prime meal steady, 8 per cent., \$32; 7½ per cent., \$31; 7 per cent., \$30 per short ton, here. Seven per cent. loose cake, \$27.50, shipside, New Orleans. Hulls, \$10.50 loose, \$12.50 sacked. Cannot expect normal conditions before October.

Dallas.

(Special Wire to The National Provisioner.)

Dallas, Tex., September 7, 1916.—Cottonseed oil market quiet today; not much trading. Prime yellow cottonseed oil, 71½¢@72c.; prime crude, 66c. bid for September. Prime cake, \$32, f. o. b. Galveston.

THE PICARD-LAW COMPANY

Expert Cotton Seed Products Chemists

Magnificently-equipped laboratories covering 5,500 square feet of floor space. Six highly-educated experienced chemists in analytical department.

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GREASES, PACKING HOUSE PRODUCTS, FERTILIZERS,
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COTTONSEED CRUSHERS FACE GRAVE PROBLEMS

Texas Mill Owners Consider Plans for Saving Their Business

Cottonseed crushers of Texas, at a meeting in Dallas last week, took the first steps in a movement to determine the cause of the conditions that have brought about the present instability of this market and, if possible, to devise ways and means for overcoming them. The meeting was attended by more than 100 cottonseed oil men from all parts of Texas, and a committee of fifteen was appointed to seek a means to re-establish the equilibrium in this industry. Crushers said that the high price of cottonseed, the wide fluctuations in price and other conditions had brought about such instability that crushers in all parts of Texas were losing money.

The warning was frequently sounded at the meeting that unless some plan is devised whereby individual oil mill operators can make a reasonable return on their investment, they would gradually be driven out of the business by large corporations operating a line of mills, or by big manufacturing industries which operate mills for the purpose of being assured a supply of the raw materials which they use in the manufacture of articles in which the products of cottonseed are important.

The meeting was called by Colonel J. W. Allison, of Dallas, chairman of the Bureau of Publicity of the Interstate Cottonseed Crushers Association. Two plans for placing independently operated cottonseed oil mills on a paying basis were discussed: one, known as the "Louisiana" plan, which is now in operation in Louisiana, was presented by Colonel Allison, and the other, the "South Carolina plan," was presented by Secretary B. F. Taylor, of the South Carolina Cottonseed Crushers' Association.

Good points were found in both plans and the committee of fifteen was instructed to take the best out of the two plans that

could be applied to Texas conditions and devise a new plan to be put in operation in this State.

The Louisiana plan calls for an official cottonseed quotation committee to consist of the Commissioner of Agriculture, the president of the State Farmers' Union, or some person representing the farmers, and an expert oil mill operative. This committee, appointed by the governor, would be virtually a state commission, under state direction, but the oil mill men would pay all expenses.

The work of such a commission in Texas would be to make a minute study of the cottonseed crushing industry, arriving at an average cost of crushing, an average yield of products, together with an average rate of freight paid, all of which figures in the aggregate, and not in detail, would be published and revised as often as may seem necessary due to changes in any items.

On the basis of these figures the commission shall, over its own signature and on a fixed day in the week, state for the guidance of cottonseed sellers and buyers, a minimum seed price, f. o. b. cars at all Texas stations, together with such comment or advice as to market conditions as members may deem expedient.

It was claimed that this plan would tend to:

1. Disseminate authoritatively correct information concerning a business vitally important to the agricultural development of Texas, and now either not fully understood or misrepresented, and thus

2. Create mutual respect and confidence between the millers and the seed producers.

3. Decrease the power of seed speculators and middlemen, who now stand as a heavy burden and tax upon the business, increasing the cost to the mill, diminishing the returns

The Procter & Gamble Co.

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Will be pleased to quote prices on all grades of Refined Cotton Seed in barrels or loose in buyers or sellers tank cars, f. o. b. refinery or delivered anywhere in this country or Europe.	

to the producer, and creating ill-feeling between the two.

4. Give the producer better prices for his seed, a more stable market, and more satisfactory business, while assuring to the oil mill and its shareholders more satisfactory and equitable returns upon their investment, and thus preventing the centralization into a smaller number of large mills located at railroad centers a business now distributed among more than 200 cities and towns of Texas, and contributing largely to the industrial wealth and development of these 200 communities.

A feature of the South Carolina plan, which it was thought was particularly applicable to Texas conditions, is to devise a means of determining the actual tonnage of cottonseed marketed in the State, and the average tonnage of the respective mills. Valuable statistical information could be based on such facts. The plan calls for a symposium which will ascertain from the mills the number of tons of meal and hulls they manufacture, the number of tons they sell for shipment within the borders of the State, the number of tons they ship out of the State and the number of tons they import. This information makes possible accurate predictions as to the trend of the market under any given conditions.

Several speakers addressed the meeting, giving their views as to the cause of the unstable conditions in the cottonseed crushing business in Texas. Clarence Ousley, director of the department of extension of the Texas Agricultural and Mechanical College, told the mill men present that publicity was the vital point.

He said no business which deals with the public can succeed without taking the public into its confidence and giving the widest publicity to its affairs. He urged the oil men to adopt some plan whereby the people generally may be advised of the cost of crushing a ton of seed, the value of the products thereby derived, and other information that will enable them to realize what a fair price for a ton of cottonseed under given conditions would be. In that way, he said, the mill men would gain the confidence in each other which is so necessary, and would win the confidence of the public, thus enabling them to buy seed at a price that would permit of a manufacturer's profit, allowing them to earn a reasonable return on their investment.

PRODUCTION OF SOYA OIL IN UNITED STATES Facts and Figures of Interest to Cotton Seed Oil Mills

By L. P. Nemzek, Special Technical Agent U. S. Paint Mfrs. Association.

(Continued from last week.)

[EDITOR'S NOTE.—This authoritative review of the soya bean situation from a technical and practical standpoint will be read with interest by all cotton oil mill men and others interested in the problem of diversification in the Southern crushing industry and in oil production. It was prepared for presentation at the recent convention of the North Carolina Cotton Seed Crushers' Association.]

Might Pay to Import from Manchuria.

It may prove profitable for the mills to import the beans from Manchuria. Due to the war and its effect on water freights it would not prove a desirable undertaking at the present time, but when the matter was looked into two or three years ago, it was found that the beans could be imported for \$1 per bushel.

The mill operator should keep this in mind, because the future production in this country may be such at certain periods, at least, as to warrant importation, or, on further and more careful investigation, it may be found possible to crush imported beans almost continually, regardless of what this country's crop develops into.

In portions of Manchuria where the best results are obtained the yield per acre varies from 20 to 30 bushels. The average height of the plant is about 36 inches; the plants carry from 30 to 100 pods, and each pod bears from two to three seeds. The variety cultivated most extensively is a medium-size bean, yellow in color, and almost round. The yield in this country from data up to date varies from 12 to 53 bushels; 25 to 30 bushels can be considered a fair average.

Price Depends on Competing Products.

From the present outlook the price of soya beans under normal conditions will be determined very largely by the market value

of seeds from which competing oils are made, chiefly flaxseed, cottonseed and corn. The price of soya beans will always be lower than flaxseed and higher than corn.

Soya beans as a crop can be grown under very much the same conditions as corn, and while the yield in bushels is 15 to 25 per cent. less, an advance of 25 to 30 cents per bushel over corn should make them a profitable crop, taking into consideration the fertilizing value of soya beans, which is of vital importance to the farmer, and will continue to be as the fertility of the land is decreased by continual cropping and the cost of artificial fertilizers increases because of the growing scarcity of materials from which they are made.

In those sections of the South where the cotton fields are infested by the boll weevil, the growers may find it to their advantage to produce soya beans on a large scale. The Alabama Cotton Seed Crushers' Association has the matter under careful consideration at the present time. The cotton crop of certain sections of that State has been seriously affected by the disastrous results which accompany the boll weevil.

It is at once apparent that it is to the advantage of the cottonseed mills to take up the crushing of soya beans. In the first place, it will help to give the mills a longer season and thereby shorten the period of idleness. This period generally varies from four to six months every year with different mills.

Compared With Cottonseed Crushing.

The crushing of soya oil has advantages

HARDENED EDIBLE OILS

MADE FROM

VEGETABLE OILS OF ALL KINDS

Oils Hardened to Order

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over cottonseed; it is a cleaner and easier material to handle preparatory to crushing, and the bean releases its oil as freely, at least, as cottonseed.

Soya oil can be disposed of just as readily, at least, as cottonseed. To have the oil reach the hands of the consumer through a jobber specializing in the oil will undoubtedly prove more satisfactory to all concerned than if each mill attempted to sell the consumer direct.

The question of freights, shipping containers, etc., would be vexing and inconvenience most of the consumers, and it would facilitate matters considerably if the oil was handled through jobbers in a manner similar to which the consumer has been accustomed in procuring the imported oil. In some cases the consumers who could handle it in tank cars would be able to deal direct with the crushers. The A. M. Parks Company, of Philadelphia, was one of the first to import soya oil, and still imports it in large quantities. Two or three years ago the company distributed an interesting pamphlet entitled "Soya," in which the commercial possibilities of the oil are referred to in some detail.

Uses of Soya Oil and Cake.

The cake as such, or in the form of meal, should be disposed of just as readily as cottonseed cake or meal for fertilizer purposes or for stock feed. As a stock food soya bean meal is even better than cottonseed meal.

The crude or raw oil, after it has settled, finds application chiefly in the manufacture of soap, paints, linoleums and in foundries in the manufacture of cores. Quantities of soya oil have been used in the manufacture of cores with very satisfactory results. The oil has been found superior to what is commonly known as "core oil." Soya oil for this purpose has been found much superior to corn and cottonseed oil, which have been also tried out on a large scale.

While practical paint tests started in 1911 have not yet been completed, and the bureau, in line with its adopted policy, does not intend to make a definite report until the investigation has been completed, the writer feels safe in stating that large quantities of soya oil will eventually be consumed in the manufacture of paint and varnish.

Because of the inferior drying properties of soya oil as compared with linseed oil it cannot entirely displace linseed oil, and its use in connection with linseed oil will be limited to from 25 to 50 per cent., depending on the product in which it is used. You understand that the drying properties can be taken care of when used in such quantities by the addition of driers, or the oil may be treated with metallic driers in the varnish factory, and in this manner the drying properties can be made to resemble those of linseed oil.

For some time to come, and depending somewhat upon the price of cottonseed oil, soya oil will find its largest consumption in the manufacture of soaps. At the present time it is more adapted for use in this industry than in any other.

The oil can be refined, and when this is done, it is suitable for edible purposes. It can be used in a manner exactly similar to cottonseed and, in some respects, it may even be superior to refined cottonseed. Tests

have been made by the Baskerville process with excellent results.

The cake and meal can be disposed of as fertilizer and as stock food. In both respects it is the equal, at least, of cottonseed cake or meal. Here again the Agricultural Experiment Stations can point out the advantages to the farmer and stock grower.

Soya oil finds a market in exactly the same manner as cottonseed oil finds.

It is an assured fact that the demand for the oil will increase. The importations for the United States for the past five years have varied from fifteen to forty-five million pounds, and, as the oil becomes better known, more will be used, so that within a few years the consumption in this country should be at least several times the amount which has been used during any year heretofore.

FEEDING AND MARKETING POULTRY.

(Continued from page 18.)

ing the chickens, containing the elements naturally required by the poultry.

Fifty-five to 60° F. is a desirable temperature for feeding rooms, with a fairly good circulation of air.

Before killing, poultry should fast 24 hours, being given a plentiful supply of clean, cool water. When killed they should be thoroughly bled.

Do not chill poultry at below 33° F. nor over 35° F., and if to be carried for any length of time they should be placed in a "sharp" freezer, usually 5° to 10° F.

Cottonseed meal is also a desirable poultry food, especially as an egg producer, having a high albuminoid content. It is usually mixed with cornmeal, wheat-bran, oatmeal, shorts or small grain, to the extent of one-third of the whole, and is feed dry or wet in the shape of a thin dough.

(To be continued.)

ROUMANIA RESTRICTS MEAT USE.

A circular addressed by the Minister of Interior to the prefects of departments and mayors of communities in Roumania prohibits the use of meat throughout the kingdom on three days each week during summer, this prohibition applying to restaurants and railway stations as well as to the various health resorts. Exception, however, is made in the case of invalids, who may consume poultry on the "meatless" days. The minister's circular reads:

"In view of the fact that during summer the consumption of meat is not as frequent, and that on the other hand fresh vegetables are to be found in abundance at this time of the year and constitute a nutriment which can very well replace meat, the Ministry of Interior, upon the advice of the Central Commission for Food Supplies, has decided that the number of days on which no meat is to be consumed will be three per week, and not two as heretofore. We, therefore, beg you to take the necessary measures in order to prevent the sale and consumption of meat on Mondays, Wednesdays and Fridays, and consequently not to allow the slaughtering of cattle in abattoirs on the eve of these days. You will see that the measures are applied in restaurants and railway stations as well as in all health resorts. For certain invalids an exception can be made in order to permit them to consume poultry."

ARGENTINE EXPORTS OF MEAT.

The shipments of meat from Argentine and Uruguayan ports in the first half of 1916 show a large increase over the same period in 1915. The Revista Financiera y Comercial of July 22 gives the following figures:

	Frozen mutton carcasses.	Frozen beef, quarters.	Chilled beef, quarters.
January	191,011	353,872	112,152
February	158,013	457,386	73,840
March	188,172	473,728	70,243
April	176,352	440,756	52,539
May	253,556	540,228	80,650
June	155,117	431,125	79,572
Total, 6 months...	1,122,221	2,697,065	469,016
Th. same period 1915.	835,976	1,917,485	772,002

While the exports of frozen meat have increased, there has been a decrease in the exports of chilled meat. It has been found that the frozen meat, particularly in exports to the Continent, gives more satisfaction than the chilled meat, and can be handled to better advantage. This is because of war conditions, under which frozen meat can be handled to better advantage, and because of lack of refrigeration on shipboard for the proper carriage of chilled meat. Frozen meats can be piled up like cordwood and kept with much less loss than chilled meat in ocean transit.

Cottonseed Products Associations.

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THE WEEK'S CLOSING MARKETS

FRIDAY'S GENERAL MARKETS.

Lard in New York.

New York, September 8.—Market strong. Western steam, \$15.20 nom.; Middle West, \$14.65@14.75; city steam, 14 $\frac{1}{4}$ c. nom.; refined Continent, \$15.70; South American, \$16.20; Brazil, kegs, \$17.20; compound, 11 $\frac{1}{2}$ @11 $\frac{1}{4}$ c. nom.

Marseilles Oils.

Marseilles, Sept. 8.—Copro fabrique, 144 fr.; copra edible, — fr.; peanut fabrique, 135 fr.; peanut edible, — fr.

Liverpool Produce Market.

Liverpool, Sept. 8.—(By Cable).—Beef, extra India mess, 170s.; pork, prime mess, 145s.; shoulders, square, 79s.; New York, 74s.; picnic, 71s.; hams, long, 103s.; American cut, 101s.; bacon, Cumberland cut, 96s.; long clear, 99s.; short back, 90s.; bellies, clear, 98s. Lard, spot prime, 80s. 6d.; American refined, 28-lb. box, 81s. 3d.; October, 80s. 3d. Lard (Hamburg), nom. Tallow, prime city, 49s.; New York City special, 50s. Cheese, Canadian finest white, new, 104s. Tallow, Austrian (at London), 45s. 9d.

FRIDAY'S CLOSINGS.

Provisions.

The market was less active and a little lower. Some realizing developed but offerings were not large and were well taken.

Tallow.

Prices are very quiet for all qualities and offerings light. City specials loose is quoted at 8 $\frac{3}{4}$ c.

Oleo Stearine.

The market is very firm with trade light. Oleo is quoted at 12c.

Cottonseed Oil.

The market was again active with values showing some reaction. Selling by commission houses was on a large scale but was well absorbed at the lower levels.

FRIDAY'S LIVESTOCK MARKETS

Chicago, September 8.—Hog market, slow, mostly 15c. lower. Bulk of prices, \$10.20@11.05; light, \$10.30@11.35; mixed, \$9.85@11.35; heavy, \$9.80@11.10; rough heavy, \$9.80@11.05; Yorkers, \$10.90@11.15; pigs, \$6.50@9.30; cattle, weak to 10c. lower; beefs, \$6.60@11.35; cows and heifers, \$3.65@9.40; Western, \$3.35@9.20. Calves, \$8.75@13. Sheep, 10@15c. higher; lambs, \$7@10.90; Western, \$7@8.30; Native, \$6.75@8. Yearlings, \$7.50@9.10.

Omaha, September 8.—Hogs steady, at \$10.25@10.90.

Buffalo, September 8.—Hogs steady; on sale, 4,000, at \$11.40@11.75.

Kansas City, September 8.—Hogs steady, at \$10.40@11.10.

St. Joseph, September 8.—Hogs slow, at \$10.25@10.90.

Sioux City, September 8.—Hogs strong, at \$10.15@10.85.

Louisville, September 8.—Hogs steady, at \$10.40@11.05.

Indianapolis, September 8.—Hogs steady, at \$11.45@11.50.

St. Louis, September 8.—Hogs higher, at \$10.70@11.45.

PACKERS' PURCHASES

Purchases of livestock by packers at principal centers for the week ending Saturday, September 2, 1916, are reported as follows:

Chicago.

	Cattle.	Hogs.	Sheep.
Armour & Co.	7,046	29,500	21,540
Swift & Co.	7,058	17,700	27,817
Morris & Co.	6,906	8,500	9,813
Wilson & Co.	5,960	11,700	8,657
G. H. Hammond Co.	2,543	10,000	...
Libby, McNeill & Libby	2,035	...	...
Anglo-Amer. Provision Co.	1,017	6,100	...

Brennan Packing Co., 2,800 hogs; Roberts & Oake, 4,800 hogs; Independent Packing Co., 13,500 hogs; Boyd, Lunham & Co., 5,200 hogs; Western Packing & Provision Co., 12,200 hogs; Miller & Hart, 3,100 hogs; others, 7,800 hogs.

Kansas City.

	Cattle.	Hogs.	Sheep.
Armour & Co.	7,704	9,203	1,523
Fowler Packing Co.	704	...	252
Wilson & Co.	6,086	6,873	2,180
Swift & Co.	9,538	7,116	3,540
Cudahy Packing Co.	6,091	2,722	3,803
Morris & Co.	6,975	5,488	3,786
Others	1,930	1,878	114

Bount, 194 cattle and 758 hogs; Hell Packing Co., 829 hogs; Independent Packing Co., 292 cattle; John Morrell & Co., 639 cattle; Schwartz, Bolen & Co., 164 cattle and 4,637 hogs; J. Stern & Sons, 106 cattle; United Dressed Beef Co., 391 cattle.

Omaha.

	Cattle.	Hogs.	Sheep.
Morris & Co.	3,243	5,228	5,016
Swift & Co.	5,519	6,989	19,358
Cudahy Packing Co.	3,892	9,720	10,841
Armour & Co.	5,049	9,194	17,899
Swartz & Co.	...	343	...
J. W. Murphy	...	3,738	...

Lincoln Packing Co., 173 cattle; South Omaha Packing Co., 60 cattle; Kohrs Packing Co., 427 hogs.

St. Louis.

	Cattle.	Hogs.	Sheep.
Morris & Co.	6,105	4,836	2,755
Swift & Co.	7,018	5,486	3,237
Armour & Co.	6,470	6,423	3,784
East Side Packing Co.	313	2,013	...
Independent Packing Co.	326	...	209
Hell Packing Co.	...	216	...
Krey Packing Co.	5	232	...
J. H. Belz Provision Co.	...	1,215	...
Carondelet Packing Co.	...	203	...
Sartorius Provision Co.	...	374	...

SLAUGHTER REPORTS

Special reports to The National Provisioner show the number of livestock slaughtered at the following centers for the week ending September 2, 1916:

CATTLE.

Chicago	52,812
Kansas City	37,028
Omaha	13,250
East St. Louis	20,204
St. Joseph	5,985
Cudahy	600
New York and Jersey City	9,290
Philadelphia	3,052
Pittsburgh	980
Denver	2,184
Oklahoma City	4,668

HOGS.

Chicago	150,425
Kansas City	33,759
Omaha	30,447
East St. Louis	35,555
St. Joseph	25,770
Cudahy	3,933
Ottumwa	6,400
Cedar Rapids	5,480
New York and Jersey City	21,577
Philadelphia	3,966
Pittsburgh	2,553
Denver	6,130
Oklahoma City	18,535

SHEEP.

Chicago	76,001
Kansas City	17,198
Omaha	41,680
East St. Louis	14,103
St. Joseph	8,973
Cudahy	423
New York and Jersey City	38,937
Philadelphia	9,147
Pittsburgh	1,060
Denver	4,393
Oklahoma City	467

RECEIPTS AT CENTERS

SATURDAY, SEPTEMBER 2, 1916.

	Cattle.	Hogs.	Sheep.
Chicago	12,000	28,000	13,000
Kansas City	200	1,500	...
Omaha	300	8,000	1,900
St. Louis	2,500	6,000	800
St. Joseph	...	4,000	...
Sioux City	800	4,000	300
St. Paul	2,100	1,700	1,000
Oklahoma City	...	3,000	...
Fort Worth	300	2,000	...
Milwaukee	300	900	300
Denver	128	764	4,720
Louisville	600	1,300	1,500
Cudahy	...	1,000	...
Wichita	...	1,175	...
Indianapolis	500	600	...
Pittsburgh	...	2,500	600
Cincinnati	900	2,700	800
Buffalo	1,400	4,000	1,600
Cleveland	1,000	2,000	800
New York	565	1,240	1,793
Toronto, Canada	258	...	...

MONDAY, SEPTEMBER 4, 1916.

Chicago	6,000	14,000	6,000
Kansas City	5,800	3,100	3,700
Omaha	1,800	400	1,350
St. Louis	2,500	1,500	1,000
St. Joseph	1,000	800	1,700
Sioux City	1,400	1,000	3,800
St. Paul	4,900	4,900	500
Oklahoma City	200	1,600	...
Fort Worth	300	500	...
Denver	476	132	1,353
Louisville	1,000	700	250
Indianapolis	100	200	...
Pittsburgh	2,400	4,500	4,000
Buffalo	3,400	2,700	2,000
Cleveland	1,500	1,500	...
New York	4,676	6,000	6,247

TUESDAY, SEPTEMBER 5, 1916.

Chicago	1,000	3,000	12,000
Kansas City	8,500	5,000	6,500
Omaha	2,300	700	25,000
St. Louis	2,600	1,000	850
St. Joseph	1,100	1,000	2,500
Sioux City	...	700	...
St. Paul	1,000	1,000	200
Fort Worth	500	600	300
Milwaukee	300	500	300
Denver	456	75	127
Louisville	...	200	...
Detroit	...	750	...
Cudahy	...	800	...
Wichita	...	35	...
Indianapolis	...	4,000	...
Pittsburgh	...	3,000	1,000
Cincinnati	400	2,335	300
Buffalo	850	2,500	600
Cleveland	...	1,000	...
New York	703	1,342	5,925

WEDNESDAY, SEPTEMBER 6, 1916.

Chicago	12,000	11,000	19,000
Kansas City	12,000	7,000	4,800
Omaha	5,800	2,000	30,000
St. Louis	15,000	4,000	2,300
St. Joseph	2,100	1,000	1,000
Sioux City	1,500	2,000	2,000
St. Paul	2,400	2,000	1,000
Oklahoma City	700	1,400	6,000
Fort Worth	2,000	3,500	...
Milwaukee	150	936	200
Denver	1,062	75	...
Louisville	350	500	200
Detroit	...	2,600	...
Cudahy	...	500	...
Wichita	...	672	...
Indianapolis	...	5,000	...
Pittsburgh	...	2,500	500
Cincinnati	500	2,153	1,100
Buffalo	1,000	1,600	1,400
Cleveland	...	1,000	...
New York	1,480	3,527	4,250

THURSDAY, SEPTEMBER 7, 1916.

Chicago	6,500	12,000	18,000
Kansas City	9,000	8,000	5,000
Omaha	5,600	2,700	13,500
St. Louis	7,500	6,000	1,000
St. Joseph	2,200	4,200	1,000
Sioux City	700	2,500	3,500
St. Paul	...	2,000	...
Oklahoma City	1,000	1,000	...
Fort Worth	2,100	2,700	...
Milwaukee	...	1,005	...
Louisville	...	1,000	...
Detroit	...	2,800	...
Cudahy	...	600	...
Wichita	...	2,276	...
Indianapolis	...	7,000	...
Cincinnati	...	2,415	500
Buffalo	400	2,500	1,200
Cleveland	950	1,000	...
New York	1,398	1,345	2,942

FRIDAY, SEPTEMBER 8, 1916.

Chicago	4,500	16,000	13,000
Kansas City	2,000	4,000	5,000
Omaha	2,100	3,000	11,000
St. Louis	3,000	2,700	1,500
St. Joseph	2,500	3,000	150
Sioux City	700	3,500	700
St. Paul	1,500	2,500	400
Oklahoma City	1,100	4,000	...
Fort Worth	700	2,500	3,000

Watch Page 48 for
Business Chances

HIDE AND SKIN MARKETS

(SHOE AND LEATHER REPORTER)

The hide markets are more active at steady prices. There are no accumulations.

Chicago.

PACKER HIDES.—Trading was considerably restricted last week due to the uncertain transportation situation. Tanners were not interested in taking on new lots of hides, but rather in getting out hides already purchased and cured. Heavy native steers sold at 26c. involving 18,000 July, August and September hides. This registers an advance of $\frac{1}{4}$ c. over sales of ten days or two weeks ago. More available at the sale price. There are a few native steers of back salting held at 25 $\frac{1}{2}$ c. is the asking rate for May-June kill. Some February-March hides are sold at 23c. and bids at 22 $\frac{1}{4}$ to 22 $\frac{1}{2}$ c. have been refused for them. Texas steers sold at 23 $\frac{1}{2}$ and 24c. for about 18,000 hides, an advance on the heavies which previously sold at 23 $\frac{1}{4}$ c. The outside is considered nominal market for further business with the lights quoted on a parity with the extreme lights at 23 $\frac{1}{2}$ c. Available supplies of Texas steers are moderate. Production is heavy. Butt branded steers were not moved. These last sold at 23 $\frac{1}{4}$ c. which is the nominal market for further business. Killers are inclined to talk more money owing to the strength displayed in native steers. Colorado steers were quiet. Last trades were at 22 $\frac{1}{4}$ c. which is considered the nominal market for further movement. Available supplies are moderate. Branded cows sold to the extent of 4,000 current hides at the last sale figure of 23 $\frac{1}{2}$ c. Production is picking up somewhat and is expected to reach maximum by early fall. The runs of branded cows are not as great as they were several years ago, however. Heavy cows sold at 25c. for 4,000 June, July and August kill and a thousand September forward kosher heavy cows went at 24 $\frac{1}{2}$ c. Supplies of this selection are meager and production is extremely limited. The kill of this class of cattle is expected to pick up materially within the next six weeks. Light native cows were not moved. One killer has June forward and the rest of the killers have August hides unsold. Last trades were at 25c. and this rate would be eagerly accepted for the present stocks. Buyers though have lower ideas. Native bulls were not moved. New York reported business at 22c. which is the last trading price locally for slaughter ahead to the end of the year. Available supplies are nil. Branded bulls sold at 17c. for one killer's January to June 1916 production of 1,100 hides. Current kill of branded bulls quoted at 18 $\frac{1}{2}$ to 19c. nominal as to sections and quality. Recent sales at these rates. Production is limited and unsold stocks are meager.

Later.—Packer market is strong. Good inquiry is noted for the small stocks held. Ten thousand 40 to 45 pounds light August cows brought 24 $\frac{1}{2}$ c. and 15,000 July-August straight weight light cows went at 25c. More attention has been paid lately to light weight hides.

COUNTRY HIDES.—Business in common country hides was of fair proportions during the early days of the week. This was before the transportation situation came to an acute crisis and embargoes were placed on shipments. Heavy steers here were quiet. Recent business was effected in outside lots at 20c. for current collections. This is considered full market for local small supplies, which are generally held up to 21c. Heavy cows sold at 19c. for a couple of cars of current quality, in connection with buffs at 19 $\frac{1}{2}$ c. Dealers are trying to draw 19 $\frac{1}{2}$ c. on further lots, but buyers are insisting upon a discount from the buff price. Buffs sold at 19 $\frac{1}{2}$ c. for about 4,000 seasonable hides as currently received. Efforts to get 20c. have thus far been futile. All number one buffs are now offered at 20c. without attracting attention. No seconds were moved alone. These are quoted at 18 $\frac{1}{4}$ to 18 $\frac{1}{2}$ c. nominal. The situation in the originating sections is steady at 19 $\frac{1}{4}$ -20c. delivered basis for 25 lbs. up hides as to quality and originating sections. Extremes sold at 21 $\frac{1}{2}$ c. for a car of good seasonable hides in connection with a couple of cars of similarly described hides at 21 $\frac{1}{2}$ c. Two other cars of extremes practically all short-haired went at 21 $\frac{1}{2}$ c. Bids at 22c. were reported from several sources for picked over lots of hides suitable for patent leather purposes. Dealers are not ready to talk such assortments as yet. Branded cows remain quiet and waiting at 17 $\frac{1}{2}$ -18c. flat basis nominal. Inside is considered nearer the market. Country packer branded hides are quoted at 21 $\frac{1}{2}$ -22 $\frac{1}{2}$ c. as to descriptions and originating sections. Bulls were quiet. Last sales were at 17c. Most of the small lots offered are held at 17 $\frac{1}{2}$ c. Country packer bulls are quoted at 20 $\frac{1}{2}$ -21 $\frac{1}{2}$ c. for business as to salting; outside recently paid locally for slaughter ahead to the end of the year. Kipskins are strong in tone and wanted. Country skins sold locally at 24c. in small parcels. City skins are held at 25-26c. as to sellers and lots; packer skins last sold at 28 $\frac{1}{2}$ c. for slaughter considerably in advance of production.

Later.—Market steady. There is a moderate call for extremes at 21 $\frac{1}{2}$ c. to 22c. according to quality. Sellers ask 22 $\frac{1}{2}$ c. for choice lots. Buffs and heavy cows sell at 19 $\frac{1}{2}$ c.; 19c. is bid for all heavies.

CALFSKINS were active. Advices from outside points would indicate a better feeling in skins, but it is not yet manifested here. First salted Chicago city calfskins last sold at 32c. Efforts to get 32 $\frac{1}{2}$ c. have failed to even draw bids at 32c. An outside lot of first salted eastern is reported sold at 33c. Outside city skins in the local market, resalted, quoted at 31-31 $\frac{1}{2}$ c. Country skins sold at 30c. in a small way and trades from outside points were put through at 29c. and 30c. Packer skins sold at 36c. 15,000 July-August selling. Efforts to get skins at 35c. proved futile, as all sellers were firm. There were a couple of rumors

around the market that business had been done at 36 $\frac{1}{2}$ c., but no confirmation could be obtained. Deacons are quoted at \$2.10-2.30 last paid and light calf at \$2.30-2.50; outside recently realized for city collections.

Later.—Calfskins are active and firm. Western Pennsylvania packer calfskins brought 35 $\frac{1}{2}$ c. and 28c. for kips. Chicago city calf brought 33 $\frac{1}{2}$ c. for 10,000. Dealers now asking 34c.

HORSE HIDES are slow. Summer hides of country quality quoted at \$6.25 bid and up to \$6.50 asked. Better lots are held up to \$6.75. City hides range at \$6.90-7.25 as to qualities. Ponies and glues quoted at \$2.50-3.00, and coltskins at \$1.00-1.50 nominal.

HOGSKINS are selling about as fast as available at \$0-90c. for the regular country run with the rejected pigs and glues out at half price. No. 1 pigskin strips are active, bringing 10-10 $\frac{1}{2}$ c. as to measurements; No. 2's quoted at 9-9 $\frac{1}{2}$ c. and No. 3 strips at 5-6c. last paid as to descriptions.

SHEEP PELTS.—Pullers display a moderate amount of interest in the raw material markets. Killers are still successful in keeping their supplies down to a low point, most sellers being sold to date or slightly in advance of production. Packer sheepskins of current river take-off sold at \$1.40. Prior business was at \$1.37 $\frac{1}{2}$ and for local slaughter up to \$1.42 $\frac{1}{2}$ was paid. Lambskins are offered at \$1.55 for river production. Prior business was at \$1.52 $\frac{1}{2}$ for river goods and up to \$1.57 $\frac{1}{2}$ for Chicago take-off. Dry western pelts quoted at 23 $\frac{1}{2}$ c. bid for ordinary lots and 24 $\frac{1}{2}$ c. talked for best Montana descriptions.

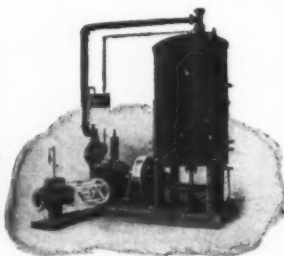
New York.

PACKER HIDES.—The packer market was somewhat active and stronger during the past week, with a sale noted by one uptown packer of a car each month of July to November inclusive spready native steers at 27 $\frac{1}{2}$ c. and two cars of December at 27c. Last sales of spreads were at 26 $\frac{1}{2}$ c. for June and December and 27c. for July to November inclusive. Unsold stocks are of moderate proportions and sellers now talking 27c. for June and December and 27 $\frac{1}{2}$ c. for July to November inclusive. No further trading is reported in native bulls, with unsold sellers now asking 22c. for June to January salting. Some back salting April and Mays are available at 20 $\frac{1}{2}$ c. asked. Native steers last sold at 25 $\frac{1}{2}$ c. and considered nominal for further trading. Butt brands are quoted at 22 $\frac{1}{2}$ to 23c. nominal; Colorados 22 to 22 $\frac{1}{2}$ c.; cows, all weights, 23 to 23 $\frac{1}{2}$ c. nominal, and native bulls 21 $\frac{1}{2}$ to 22c. asked. Small packer hides were quiet and waiting. No business reported locally. Available supplies here are small. Sellers are endeavoring to interest buyers in native bulls which are nominally quoted at 21 $\frac{3}{4}$ c. for June to January with buyers' ideas fully $\frac{1}{2}$ to $\frac{3}{4}$ c. less for business. Last sales of native cows all weights were at 22 $\frac{1}{2}$ c.

CALFSKINS.—The packer and city calfskin market is strong, but trading is somewhat restricted by small receipts and offerings. A car of New York city calfskins, 5-7 lb. average, sold at \$3.15. New York cities, all weights, are nominally quoted at \$3.15, \$3.65 and \$4.15-\$4.20. Outside cities are held at \$3, \$3.50 and \$4. The country calfskin is unchanged but steady at \$2.75 to \$2.85 for 5's; \$3.25 to \$3.35 for 7-9's, and \$3.75 to \$3.85 for 9-12's.

HORSEHIDES.—Horsehides remain steady but quiet. Eastern cities are held at \$7 with buyers' ideas around \$6.75 for business. Fronts are nominal at \$4.50 to \$4.75 and butts \$2.50 to \$2.75 asked as to measurements.

COUNTRY HIDES.—Quiet and waiting. Sellers are asking 19 $\frac{1}{4}$ to 20 $\frac{1}{2}$ c. now for Pennsylvania and Ohio buff weights as to hair. Nothing strictly short haired is offered at under 20c. although tanners believe they could (Continued on page 42.)



LET THIS MACHINE BE YOUR PARTNER!

It asks no share in your profits, BUT—
It will eliminate your rendering troubles.
It will greatly increase your profits.
It will cut down the cost of conducting your present business.
And at the same time help you to a Bigger Business.

THE WANNENWETSCH SYSTEM
C. H. A. WANNENWETSCH & CO.
BUFFALO, N. Y.

Packing House and Rendering Plant Architects.

LIVE STOCK MARKETS

CHICAGO

(Special Letter to The National Provisioner from
The National Livestock Commission Co.)

Union Stock Yards, Chicago, Sept. 6.

Never in all our experience has the cattle trade undergone so many sudden and violent fluctuations as during the past ten days. Conditions, of course, have been abnormal, as a week ago it looked like a railroad "tie-up" and the packing outfits, big and little, were anxious to buy "anything that grew hair" and had a pick of kill on it. The culmination came on Thursday, Aug. 31, at which time we sold four loads of 1,387-lb. steers at \$11.50 per cwt., or just 60c. per cwt. more than they brought the previous Monday, and we sold plenty of steer cattle that looked all the way from 75c. @ \$1.25 per cwt. higher than the week previous. On Friday we had 14,968 cattle and, of course, quite a reaction from Thursday's dizzy altitude, while on Saturday with 12,000 fresh cattle on sale it was almost impossible to "turn a wheel," and many cattle were carried until Monday, at which time fresh receipts were light, the actual supply of fresh cattle being only 6,222 head. The trade was very erratic and unevenly higher than Saturday on the good to choice cattle, while other kinds were only steady. Tuesday's market being about steady with Monday's general level of values with 1,883 cattle on sale, while on Wednesday, with estimated receipts of 12,000 fresh cattle besides some held from the close of last week, the trade ruled steady to strong on good cattle and very slow on others. But we sold all of our good to choice cattle 15 @ 25c. higher than the first of the week, while on the medium and common kinds it was a very slow, stagnant trade at about Monday's prices.

Erratic and uncertain as has been the trade during the past few days in butcher stuff, the market on this class of cattle is nevertheless on a very satisfactory basis to shippers, values being back to about the high point of the season, and as the country at large is firmly imbued with the idea of marketing she-stuff in very moderate quantities, there is no doubt in our minds about this class of cattle being comparatively scarce all fall.

Following the National's record-breaking sale of \$11.55 per cwt. for a load of 215-lb. hogs on last Thursday's red hot market, at which time hogs sold higher than since the Civil War, the trade has undergone numerous sharp fluctuations, subsiding, as it did, to an extreme top of \$11.15 on last Saturday's demoralized trade. Since that time there has been quite a decisive reaction, particularly on the good mixed hogs, and also on the choice shipping grades; however, the trade has been a rather forced affair, because of the big supply of hold-over hogs, which the first of the week amounted to about 20,000. This was reduced to about 10,000 on Wednesday night, but, nevertheless, is a factor to be considered, for the packers are reluctant to pay any advance as long as there is a respectable sized hold-over supply; besides which, resumption of normal conditions in railroad circles should bring a fairly liberal run of hogs by the latter part of this week, and surely by the first of next. Consequently, while there is still some talk of \$12 hogs before the turning point is reached, in our opinion the trade has seen about all the advance that can be expected for the present. On Wednesday we sold choice hogs of all

(Continued on page 41.)

KANSAS CITY

(Special Letter to The National Provisioner.)

Kansas City Stock Yards, Sept. 5.

Only one half as many cattle came in today as were expected by the majority of commission men, 8,500 head being the count. The market was 10 to 15c. higher on killing cattle, and more than that on stockers and feeders, which are 25 to 50 cents above close of last

week. Feeder demand affected all grades up to steers selling at \$9.50. Cows and heifers sold exceptionally well. Near prime Missouri heavy steers sold at \$10.90, and branded yearlings brought \$10.75. Best Kansas pastured steers brought \$9.60, and good to choice ones sold at \$8 to \$8.80. Feeders bid on a good many cattle from \$7.35 to \$8.10, and killers competed from the opening whistle. Oklahoma steers sold at \$6.50 to \$7, the kind that have been selling at \$6.25 to \$6.75 recently. Opinion is almost unanimous that there will be a big run of cattle all around next week, and some shippers are going to try to get here this week, considering themselves lucky if they do, for today's market was entirely satisfactory to the selling side. Cows sold at big prices, grass Westerns at \$5.35 to \$6.10, and some grass heifers at \$8.40 and \$8.50.

Hog receipts were only 4,000 head, and order buyers picked them over at 15 to 25 higher prices before packers got started, top \$11.10, bulk of the good hogs at \$10.75 to \$11. Packers had only the leanings to select from, and paid \$10.50 to \$10.85. Light runs are predicted for tomorrow at leading points, which puts the market almost on a famine basis this week. Light average weights in recent weeks indicate that the drop in receipts is a genuine shortage, and the market looks strong.

Sheep and lambs sold stronger today, several shipments of Utahs bringing the top price, \$10.50, with light sorts. Fat ewes sell around \$7.00 and yearlings \$8.00. Native lambs bring up to \$10.00, and feeding lambs range from \$9.65 to \$10. Receipts are 6,500 today, and there will be a fair supply balance of this week. Breeders bring \$7 to \$9.

ST. LOUIS

(Special Letter to The National Provisioner.)

National Stock Yards, Ill., September 6.

Receipts of cattle for the week ending today amounted to 21,900 head of which 3,200 were on the southern side. The impending railway strike last week and Monday being a holiday, have had a market effect upon our receipts. Our Monday receipts were very light indeed and Tuesday was very little better. The market up to Friday of last week ranged unevenly higher and was extremely active, this condition was noticeable particularly on Thursday and Friday. The first three days of this week indicate a change to a lower basis, this coupled with the fact that there is an appreciable lack of cattle with quality, the bulk running to the medium grassy kinds, price condition cannot be called so much off as the figures would indicate. The top for the week, both on heavy beef steers and yearlings, was made Monday when \$10.60 was paid for several carloads in these grades. The bulk of the steers are selling from \$7.75 @ \$8.50, while a fair quantity of good corn fed heaves are selling in a range from \$8.75 @ \$9.25. The supply of butcher stock is small and the trade irregular. A few decent loads of yearlings are selling at a spread of \$8 @ \$8.75, the really good kinds selling around the \$10 mark. The yearling range is also just about the range on heifers. The bulk in these classes ranging from \$7.25 @ \$8.25. Oklahoma and western receipts continue heavy. We have had approximately 200 cars for the week. They are ranging in price from \$6.25 to \$7.85.

Receipts at the hog house amount to 30,100 for the week, and with this light run the market is holding to a fairly steady and active basis. There was a break in prices on Saturday, but the market fully recovered on Monday and Tuesday and the prices today are within 15c. of the highest in our history. The quotations today are: Mixed and butchers, \$10.70 @ \$11.35; good heavy, \$11.25 @ \$11.35; rough, \$9.50 @ \$10; lights, \$10.60 @ \$11.25; pigs, \$7 @ \$10.25; bulk, \$10.70 @ \$11.25. We only received 7,300 sheep for the week, the lightest run in months. Even with this inadequate supply there is a shortage of the

really good kinds, both in sheep and lambs. The sheep market has held to a fully steady basis, with very little fluctuation in prices. Muttons are selling from \$7 @ \$7.25. Yearlings, \$6 @ \$9.50. Lambs are showing considerable strength. The top for the week was paid today when several loads of fair to good lambs sold at \$10.60. Medium to good lambs are quoted at \$9 @ \$9.85; with the bulk selling around \$10. Breeding ewes are still in demand, especially those with quality. The trade in this grade, however, is not quite as active as it was a few weeks ago.

OMAHA

(Special Letter to The National Provisioner.)

South Omaha, Neb., Sept. 5.

Receipts of cattle last week were the heaviest so far this year, some 33,000 head arriving and fully 85 per cent. of them being Western range cattle. The threatened strike of railroad employees had a very demoralizing effect on the general market and sharp advances and declines followed in quick succession. Such a small percentage of the receipts were of the corn fed variety, however, the slump in prices for these was hardly felt. When it came to the Western rangers the market actually showed improvement for the week and closing quotations were around 10 1/2 @ 15c. higher for the week. This week, as a result of the strike talk last week and the embargoes announced by the various roads on live stock and perishable freight, receipts have been extremely light, only 4,000 cattle arriving on Monday and Tuesday. Naturally, all danger of a strike at this time being averted, the market scored a sharp advance, both native and grass heaves showing a 15 @ 25c. advance for the two days. Strictly choice corn fed heaves are quoted up to \$10.60 and fair to good grades are quoted at \$9.50 @ \$10.25, the common to fair warmed up and short fed grades all the way from \$7.00 to \$8.75 and on down. Grass heaves are selling at a range of \$6.25 @ \$9.10, the fair to good kinds largely around \$7.25 @ \$8.00. Cows and heifers have shared in the general improvement and are selling at a spread of \$4.50 @ \$7.00, the fair to good butcher and beef stock largely around \$5.85 @ \$6.65. Veal calves are scarce and firmly held at \$10.00 @ \$11.25 and bulls, stags, etc., find a very good outlet at \$5.00 @ \$7.

Strike talk was also responsible for a very erratic market for hogs and prices suffered a 25 @ 35c. decline last week, part of which decline has been recovered this week. Some 45,000 hogs arrived last week but so far this week receipts have been less than 2,000 head. Prices are all of 25c. higher for the two days and there is every prospect of a strong active market as soon as receipts are of sufficient proportions to interest all the buyers. As it is, there is evidently a vigorous demand both for shipping and packing account. There were only about 900 hogs here today and they sold 10 @ 15c. higher at from \$10.10 to \$10.65. Last Tuesday the range was \$9.90 @ \$10.75.

There was a run of 135,000 sheep and lambs last week, the largest of the year to date, and more or less demoralization in the trade toward the latter part of the week. Although receipts this week have also been liberal there has been a general recovery and prices for lambs are all of 25 @ 40c. higher than at the low time a week ago. Fat lambs sold at \$10.60 today as against \$10.15 for the same lambs last Tuesday. Aged stock has been scarce and has not shown very much change. Competition from feeder buyers is still keen and about half of the receipts are sent to the country for feeding. Fat lambs are quoted at \$10.00 @ \$10.60; yearlings, \$6.50 @ \$7.50; wethers, \$6.25 @ \$7.25, and ewes \$5.90 @ \$6.90.

NEW YORK LIVE STOCK

WEEKLY RECEIPTS TO SEPTEMBER 2, 1916.

	Sheep and			
	Beaves,	Calves,	lambs,	Hogs.
New York	2,260	3,650	782	6,657
Jersey City	3,758	3,215	22,576	15,520
Central Union	3,248	945	15,579	...
Totals	9,296	7,810	38,937	21,577
Totals last week	9,868	7,717	44,915	19,445

ICE AND REFRIGERATION

NEW CORPORATIONS.

Edwardsville, Ill.—The Calla Lily Dairy Farm Company has been incorporated with a capital stock of \$50,000.

South Orange, N. J.—The Alfred Farming Corporation, to conduct a farming, dairying, etc., business, has been incorporated with a capital stock of \$25,000.

Portland, Maine.—The John Burns Company, to engage in the catching, buying, selling and packing of fish, has been incorporated with a capital stock of \$185,000.

Portland, Maine.—The H. A. Rich Company has been incorporated with a capital stock of \$90,000, to engage in buying, catching, packing and selling fish of all kinds, including shellfish.

ICE NOTES.

Wichita, Kansas.—The Crystal Ice Company's barns have been destroyed by fire.

Darlington, Wis.—The Platteville Creamery, owned by F. H. Krog, has been damaged by fire.

Reading, Pa.—Large ice house of the Mt. Penn Ice Company has been damaged by fire. Owner is Henry K. Shalter.

West Palm Beach, Fla.—An ice and cold storage plant will be built at this point by the Gas Engineering Co., of which F. D. Moses of Trenton, N. J., is president.

Harrisonburg, Va.—The installation of a small electrically operated refrigerating plant is contemplated by Julian A. Burruss, president of the State Normal School for Women.

Princeton, W. Va.—The Princeton Power Company's ten ton plant has been purchased by a company organized to operate the ice factory. It is reported that the capacity will be doubled.

El Paso, Texas.—A cold storage plant for fruits, vegetables and supplies; capacity for 2,000 tons ice; manufacture 250 tons ice daily; building to be 80x60 ft., of brick construction, will be built by the El Paso Ice & Refrigerating Company.

Toledo, Ohio.—Work will be started soon on a new six-story plant for the Citizens' Ice Company, on Nevada street near East Broadway. The new plant will have a daily capacity of 100 tons of ice, and with existing plants, will give the Citizens' Ice Company a daily output of 400 tons daily. The new plant will cost about \$100,000. The Citizens' Ice Company plans to build ice-making plants in West Toledo and on the South Side within the next year.

ORIGIN, MANUFACTURE AND PRACTICAL APPLICATION OF AMMONIA.

By Dr. Arthur Lowenstein.

(Continued from last week.)

The Manufacture or Refining of Ammonia.

Ammonia, aqua or anhydrous, is manufactured in this country principally from concentrated ammoniacal liquor. The ammonia content of this liquor varies considerably, depending on the type of concentrator which the particular factory manufacturing it employs and varies between 13 and 25 per cent. NH_3 , averaging around 20 per cent. Inasmuch as most of the modern plants have improved their type of concentrators by which a considerable amount of preliminary refining is done through the agency of heating known as "pre-heating," concentrated ammonia liquor is shipped in a considerably more concentrated state today than it was some eight or ten years ago.

By this pre-heating treatment a considerable portion of the carbon dioxide and hydrogen sulphide which were present in the form of ammonium carbonate and sulphide, are eliminated and as a result the more concentrated liquors can be shipped to the ammonia refineries at all seasons of the year without any danger of "salting" in the winter period, which formerly occurred.

In the refining of crude ammonia, both

physical and chemical methods are employed. Under the physical methods are classed the application of heat, also of refrigeration, for the removal of impurities. The chemical treatment consists in the use of such agents as lime and other alkalies such as caustic soda, mineral oils for scrubbing purposes, aqua ammonia, charcoal, etc.

The prime object in the manufacture of pure ammonia gas for aqua or anhydrous ammonia is to separate from the crude ammonia gas its various impurities step by step until finally the gas is ready for absorption in pure distilled water for aqua, or has been rendered thoroughly anhydrous, it is ready to be fed to the ammonia compressor where, under pressure and reduced temperature it is converted into liquid anhydrous ammonia. The different types of apparatus employed in the manufacture of aqua and anhydrous ammonia will be found in the several references cited above.

The point of principal importance is that it should be conducted under the supervision of competent chemists and chemical engineers from its initial to the final stages. The processes are continuous and are made as nearly fool-proof as possible. At the same time, trained chemical engineers must follow each step in the process and trained chemists should test every package of the finished product turned out, be it either aqua or anhydrous.

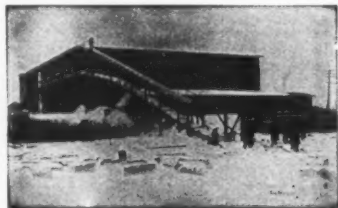
Testing of Ammonia.

Until within the last few years the only tests which the consumer made for determining the purity of anhydrous ammonia was an evaporative test which consisted in drawing a definite amount of anhydrous ammonia from the cylinder, usually 100 cubic centimeters, and allowing it to evaporate under most any sort of conditions. This test has value and if properly conducted, will enable one to tell whether the ammonia contains solid or liquid impurities which it should not contain; also, in case one so desires, to make a boiling point

INSURE YOUR ICE CROP

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Preparedness Insuredness Safety First

If you want to prepare for the hard summer season;

If you want to provide safety, reliability, long life and low repair costs for your plant;

You must secure a machine built for hard usage—one that goes and keeps going when you need it most.

Frick Machines are built particularly for this service

Write us and learn how you can get proof of it.

Frick Company
WAYNESBORO, PA. U.S.A.
ICE MACHINERY SUPERIOR SINCE 1882

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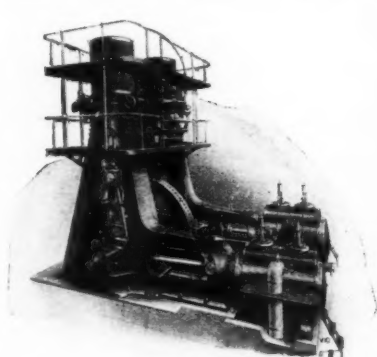
Dallas, Texas

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PURITY IS ESSENTIAL IN AMMONIA

For Refrigerating and Ice Making. Because nothing will reduce the profits of your plant so surely as Ammonia laden with organic impurities.

BOWER BRAND ANHYDROUS AMMONIA

is made from pure Aqua Ammonia of our own production, thoroughly refined and purified. Send for Free Book and Calendar.

HENRY BOWER CHEMICAL MANUFACTURING CO., 29th St. and Gray's Ferry Road, Philadelphia, Pa.

Specify BOWER BRAND AMMONIA, which can be obtained from the following:

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KANSAS CITY: Crutcher Warehouse Co.
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SAVANNAH: Benton Transfer Co.
SPOKANE: Spokane Transfer & Storage Co.
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determination which is of value, providing it is made under the proper conditions.

In making an evaporative residue test care should be taken to see that both the tube through which the ammonia is withdrawn and also the test tube in which it is received, are perfectly clean and dry, and immediately after the ammonia has been placed in the testing tube, that this tube be properly protected to prevent any aqueous condensation getting into it. It is best to surround the lower part of the test tube by means of a limited amount of brine at about 70 deg. F. so that if any volatile liquid impurities are contained in the ammonia they will be retained as residue in the tube and not be permitted to evaporate with the last traces of the ammonia.

Up to within a few years ago, cylinders of anhydrous ammonia of most manufacturers contained a considerable amount of gas other than ammonia. Usually, cylinders of ammonia are filled to about three-fourths of their capacity in order to allow room for sufficient expansion under varying weather conditions, consequently the portion not filled with liquid is filled by gas and in the case of ammonia of the highest purity. This gas should consist of almost exclusively NH_3 .

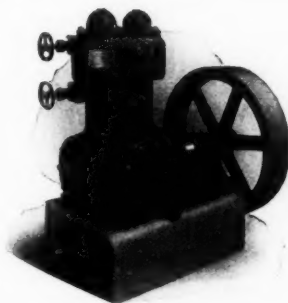
You have heard a great deal of discussion in regard to "foreign" gases. The principal leading manufacturers today have reduced the gas content of their cylinders, other than ammonia, to a minimum. Periodic testing of different brands of ammonia still reveal some, however, which contain considerable amount of air, or a modified air, in the cylinder.

The consumer in purchasing ammonia naturally will find that ammonia best suited for his purpose which is almost free from impurities, whether they be solid, liquid, or gaseous, and it is only by making suitable tests that he can determine this for himself. Simple gas tests have been evolved which show the presence or absence of appreciable amounts of non-basic gas.

In order to determine the presence or absence of a number of impurities, anhydrous ammonia from the cylinder can be expanded and the gas dissolved in pure distilled water to a definite specific gravity and subjected to the various tests listed in the United States Pharmacopoeia for pure aqua ammonia. These tests will indicate, for example, whether the product contains any pyridine and other coal tar products, carbon dioxide, sulphates, lime, chlorine, etc., etc.

The writer would caution consumers to em-

WATCH PAGE 48 FOR BARGAINS



York Refrigerating Machines

have a distinctive character all their own—in Workmanship, Durability, and Efficiency.

They embody many features not found in other Machines, and yet they are sold at a conservative price—by reason of our large output.

If you are looking for a reliable Machine—one that will give you satisfactory results under the most exacting conditions—you cannot afford to overlook the YORK line of Ammonia Compression and Absorption and Carbon Dioxide Machines.

We are prepared to give you the type of Plant best suited to meet your local needs.

Write for information and prices.

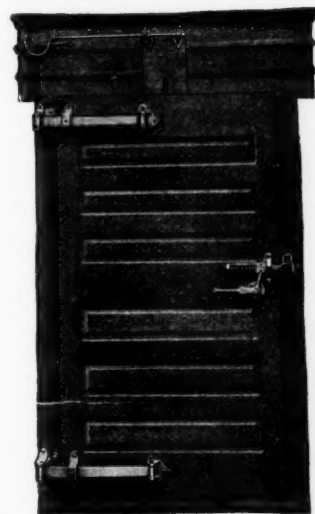
YORK MANUFACTURING CO.

(Ice-Making and Refrigerating Machinery exclusively)

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For Cold Storage
and Freezers



Have you ever examined our "JONES" or "NOEQUAL"

type of Door, and noted the heavy material used in construction, or how the massive "Jones" Automatic Fastener and "Jones" Adjustable Spring Hinges keep the door tight against the double and triple seals of contact.

If not, it's time! You should know why the Big Packers use our doors almost exclusively.

Made with or without trap for overhead rail. Cork insulated. Built for strength. A 96-page illustrated catalog upon request.

JAMISON COLD STORAGE DOOR CO.

Formerly

JONES COLD STORE DOOR CO.
Hagerstown, Maryland, U.S.A.

ploy a competent chemist and have tests made for themselves of any ammonia in question.

Practical Applications of Ammonia.

As stated in the foregoing, ammonia in the form of its salts, is principally used for agricultural purposes, in the chemical industries, refrigeration industry and for household purposes. We will confine ourselves to the refrigeration phase of the subject.

There has been a great deal of discussion relative to gases termed by the operating engineers frequently as "foreign," "Marsh," "Methane," "Hydrocarbon," "Foul" gases, etc. There has been a great deal of discussion as to the origin of these gases.

In the case of compression systems any gas introduced into the system through the ammonia would of course be of the character which was in the cylinder prior to emptying it. As stated above, the majority of the leading brands of ammonia today contain only limited amounts of such gases.

Repeated analyses of the gas which lies above the liquid in anhydrous ammonia cylinders have shown that this gas is principally a modified air. Air, as you know, contains approximately 80 per cent. nitrogen and approximately 20 per cent. oxygen, and in most cases the analyses which we have made of different brands of ammonia have shown a large amount of nitrogen present and less oxygen than is normal to air.

Several hypotheses have been advanced to explain this condition. Some have stated that the deficiency of oxygen has been due to its absorption by iron, forming rust, or possibly by the lubricating oil used in the compressor. This may or may not be the correct explanation. Some of the oxygen may possibly have been absorbed in the process of manufacture, by some of the impurities of a phenolic character in the initial raw material which are known to be capable of absorbing oxygen.

Many analyses of gas have been made, both that dissolved in the liquid ammonia itself and also of the gas which lies above the ammonia in the cylinder. In most cases they simply consist of nitrogen and oxygen in somewhat varying proportions. In one case some four or five years ago hydrogen was found present, possibly at that time metallic sodium had been used for removing the last traces of water from the product.

Analyses of condenser gases from a number of operating compression systems have usually revealed the presence of a limited amount of hydrogen. Samples were taken from systems using various kinds of anhydrous NH_3 . In practically all of these systems a small amount of hydrogen has been found to be present when gases have been withdrawn from the purge valve on the condensers. In some cases there has been as low as 0.5 per cent. and in others as high as 3.5 per cent. hydrogen present.

Typical analyses of three different systems may be of interest. In one there was no hydrocarbon gas present whatsoever and no carbon monoxide or carbon dioxide. The nitrogen content was practically 83.5 per cent., hydrogen content practically 3.5 per cent. and the oxygen about 13 per cent.

In another system different ammonia was used, and the hydrogen content was approximately 3.5 per cent., the hydrocarbon content

approximately 0.75 per cent., oxygen about 13 per cent. and the balance nitrogen.

In a compression system at a plant, which has been operating a number of years, the analysis of the gas showed 0.5 per cent. hydrogen, 15.5 per cent. oxygen, no carbon dioxide nor hydrocarbon gas, and the balance nitrogen.

As stated above, a number of such analyses from different plants have been made. The proper interpretation of such results requires considerable study. From the results of experimental evidence, the writer is not of the belief that, under normal working conditions in any compression plant, any decomposition of the ammonia takes place when any kind of pure ammonia is employed.

Experiments With an Ice Machine.

For two or three years I have had experience with running a small experimental ice machine under all sorts of abnormal conditions, frequently running at a pressure as high as 300 lbs. and maintaining it at this pressure. Where a good quality of lubricating oil was used and all the air carefully removed from the system at the time of charging, practically no gas formed, even when a working pressure of 300 lbs. was maintained for a number of days. With a low grade of lubricating oil of the character of West Virginia black oil, considerable hydrogen was evolved, in fact as high as 25 per cent. in the gas which was collected from the condenser.

It has not been determined as yet whether this hydrogen was evolved entirely from the oil, but it is the opinion at this stage that it was. It was found that when water was permitted to drip continuously on the piston rod of the machine, although the stuffing boxes were kept as tight as possible, that a slight amount of water was taken into the machine in this way.

In absorption machines it is the usual thing to find considerable amount of gas formed. Most operating engineers know that this is an inflammable gas. Analysis of such gas by our laboratory reveals the fact that the major portion consists of hydrogen. For example, from two different absorption machines analyses of the gas showed the presence of, in the one case 90 per cent. hydrogen, 2.25 per cent. oxygen, no Methane and the balance nitrogen.

From another absorption system and the basic gases ran as high as 95 per cent. hydrogen, 2.5 per cent. oxygen, and the balance nitrogen. Such a condition is the usual result in absorption systems. It is also necessary at intervals to remove considerable sludge, which consists principally of iron oxide, from the generator.

It is the writer's opinion that this hydrogen gas is not the result of decomposition of ammonia, because you will note in the analyses that there is no equivalent amount of nitrogen which would be present if the ammonia is dissociated. We know that one of the principal commercial methods of the production of hydrogen is by what is known as the steam iron process. This is employed in Germany, for example, on a considerable scale in generating hydrogen for Zeppelin machines.

In other words, it is the writer's opinion that the hydrogen is formed as a result of the dissociation of water in the form of steam through a very simple reaction of steam acting on iron, combining with the oxygen of the water, forming iron oxide and thereby liberating the hydrogen.

Analogous reasoning applied to compression machines would be about as follows: Practically no compression machine is absolutely tight and some water is very apt to get into it at some time or other. At condenser pressure and temperature, which of course are highest when a considerable amount of non-basic gases are present, such action of the steam on iron could easily take place.

We must remember at this point that ammonia is a very excellent solvent of iron oxide when it is in the form of rust, Fe_2O_3 . When the iron is in this state, namely, the

rust having been dissolved, a rough surface remains, in which case it is possible that the iron may bring about the reaction suggested above, or it is possible that the surface of the iron in this finely divided state may act as a catalyzer and produce a slight dissociation of the ammonia. The latter is not the writer's opinion, however, and research work is being conducted on this point to establish the exact facts.

It has been noted that ammonia is a solvent of iron oxide when it is in the form of rust or in the form of Fe_2O_3 . Anhydrous ammonia is practically without any action whatsoever on the magnetic form of iron oxide, namely, Fe_3O_4 . We are familiar with the latter in the form of mill scale.

(To be concluded.)

EXPORTS OF DAIRY PRODUCTS.

Exports of dairy products from New York reported up to September 6, 1916:

BUTTER.—Bermuda, 4,346 lbs.; Brazil, 1,700 lbs.; British Honduras, 300 lbs.; British West Indies, 3,573 lbs.; Colombia, 1,252 lbs.; Costa Rica, 600 lbs.; Cuba, 801 lbs.; Dutch West Indies, 611 lbs.; England, 57,879 lbs.; French Guiana, 100 lbs.; Guatemala, 1,490 lbs.; Haiti, 8,838 lbs.; Jamaica, 2,250 lbs.; Mexico, 471 lbs.; Panama, 10,490 lbs.; Peru, 2,000 lbs.; San Domingo, 1,696 lbs.; Scotland, 31,044 lbs.; Trinidad, Island of, 5,500 lbs.; Venezuela, 3,779 lbs.

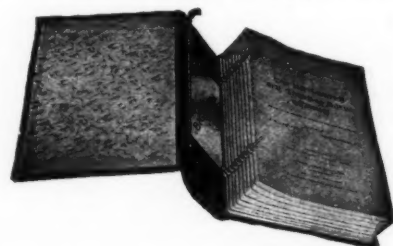
EGGS.—Argentina, 30 dz.; Bermuda, 3,630 dz.; England, 36,000 dz.; Panama, 10,500 dz.

CHEESE.—Argentina, 139 lbs.; Bermuda, 2,815 lbs.; British India, 650 lbs.; British West Indies, 1,065 lbs.; Colombia, 306 lbs.; Cuba, 4,234 lbs.; Dutch West Indies, 170 lbs.; England, 75,729 lbs.; French Guiana, 293 lbs.; Haiti, 1,200 lbs.; Honduras, 636 lbs.; Hongkong, 656 lbs.; Jamaica, 2,763 lbs.; Mexico, 100 lbs.; Newfoundland, 673 lbs.; Panama, 3,310 lbs.; Philippine Islands, 960 lbs.; San Domingo, 3,674 lbs.; Scotland, 56,115 lbs.; Trinidad, Island of, 659 lbs.; Venezuela, 1,349 lbs.

SAVE YOUR NATIONAL PROVISIONER.

How often have you wished to refer to an article or an item of trade information or some valuable trade statistics in some back copy of The National Provisioner, only to find that copy lost or mutilated? You will be glad to know that we have succeeded at last in securing a really practical binder. You can now have your Provisioner in the form of a handsomely bound book ready to refer to at any time.

The new binder is the simplest made. The binding is as simple as sticking papers on an



ordinary file. Each binder holds 26 copies of The National Provisioner, or an entire volume. The binder has the appearance of a regular bound book. The cover is of cloth board and the name is stamped in gold. The binder makes a substantially-bound volume that will be a valuable part of your office equipment or a handy addition to your library.

By special arrangement with the manufacturers we can furnish you with this binder for only one dollar. Merely send us your name and address. Simply say: "Send me your binder. I enclose \$1." The binder will be sent promptly, all charges prepaid.

FOR PURCHASING DEPARTMENTS

AN EVAPORATOR EXHIBIT OF VALUE.

The Swenson Evaporator Company will have a booth on the main floor at the National Exposition of Chemical Industry to be held at the Grand Central Palace, New York city, during the week beginning September 25. They will have a working model of an evaporator in operation, also a very interesting line of samples showing the various raw and finished products made in evaporators.

FEDERAL TRUCKS LAST FOR YEARS.

Just how high an esteem other makers have of Federal trucks was evident the other day when the Detroit dealer of a well-known motor truck company put two old model Federals on sale in front of his show room. One of them, No. 113, a truck which went into commission over five years ago, he offered for sale at \$400. The other truck, No. 993, he asked \$600 for. The party who was interested, and to whom he quoted these prices, was told that with a good overhauling these trucks would be as good as new, that these prices at which he was offering them nothing had been done to them except to cover them up recently with a coat of paint.

It is significant of the quality which is built into all Federal trucks when truck No. 113, in service over five years, is still running and can be found offered for sale by a rival dealer. The fact that the very first Federal built is still running in New York City, giving satisfactory service, is another proof of their durability.

THE IDEAL MOTOR TRUCK TIRE.

Business men in all lines of industry who have become impressed, either by personal experience or observation, with the rapid increase in use of motor trucks for every conceivable form of hauling work, will appreciate the truck-purchase record recently made by Stedman Bent, Philadelphia trucking contractor. He has placed an order with the White Company, Cleveland, for fifty 5-ton trucks, all to be equipped with Goodrich De Luxe tires.

This big individually-owned fleet can only be compared to the fleets bought from time to time by the English and French armies in Europe. Such a concentration of large expensive trucks in the hands of one owner in one city cannot be paralleled, it is believed, anywhere in the country. Certain national concerns like the Standard Oil Company, Armour & Company, etc., have a greater total number, but their trucks are distributed over the entire country, and, moreover, were purchased during a period of several years. The Philadelphia contractor placed his mammoth order at one time.

The selection of Goodrich De Luxe tires is a striking vindication of the De Luxe principle of truck tire construction. The experience of the Allies in Europe has also borne out this principle.

American tires, before the introduction of the De Luxe, were always of the same sectional height regardless of width. The Euro-

pean tires, however, and in this country the De Luxe, have been made in sections in which the height increases proportionately with the width. The theory is that merely to increase the width of a tire does not fit it for heavy or rough service.

While a broad, flat tire has a sufficient carrying capacity on absolutely level surfaces where the entire breadth of the tread is in contact with the road, such a tire is almost useless on rough, heavily crowned, or uneven surfaces where only a part of its great width bears on the ground, leaving the rest idle. The European principle and in this country, the De Luxe, is that additional rubber should be put on top and not on the sides. The ideal tire is relatively high and narrow in sections; the increased height of section gives the carrying capacity necessary, while the tire, traveling a narrower path, meets with fewer and less serious road irregularities, and even these are absorbed by the deeper and more compressible tread.

Inasmuch as these trucks are to be used for heavy and often rough work, due consideration was given to the selection of tires. De Luxe tires were found to be specially designed for work where regular tires would not hold up.

MODERN MEAT PLANT FOR PARAGUAY.

Meat packing in Paraguay heretofore has been confined to the ancient method of "jerked beef" production. The increasing world meat demand has caused the beginning of development of modern packing methods in that country of large meat resources. U. S. Consul S. H. Wiley, of Asuncion, reports that the Frigorifico Paraguay-Carne Conservada, capitalized at 250,000 pesos gold (\$241,250), was organized in Asuncion during July to erect and operate a meat freezing and packing plant. The organizers of the company are all residents of Paraguay, and it is probable that local capital will finance the enterprise.

The company intends to erect a freezing and canning plant with a daily capacity of 300 animals. The products of this plant will consist of chilled cuts of meat, canned meats, meat extract and packinghouse byproducts of all kinds. The necessary ground has already been purchased at Asuncion, on the shore of the Paraguay River. The machinery will be American, of the latest design. The power used will be electricity, motor attachments to all machines. The plant will consist of packing plant, can-making installation, barrel and box making machinery, machine shop, gas plant, two refrigerating installations, two large engines with boilers, pipes, etc., and two dynamos.

While arranging for the purchase of the machinery and awaiting its arrival a hand canning installation will be utilized, and canned boiled beef for export to Great Britain will be manufactured. The plant of this company will be managed by F. H. T. Walton, a well-known American packing-house expert, who has been in South America for some years, and who was formerly manager of a plant at San Salvador, Paraguay.

NEW SAUSAGE AND CANNING PLANT.

The Baker Packing Company's new sausage and canning factory at 49th and Halsted streets, Chicago, is now completed and in operation. It is under the management of Fred G. Baker, who is well known through his 20 years of service with the Cudahy Packing Company as manager of their sausage and canned meat departments, and who understands the business thoroughly.

The Baker organization consists of men picked for their experience and high efficiency in every department. The plant is strictly modern in construction, layout and equipment, and was built in compliance with Government inspection requirements.

The company will specialize in high grade dry sausage, in assortment necessary to meet all requirements; canned meats of all kinds; chipped beef in tin and glass, and Italian hams. The company will distribute exclusively to the wholesale trade, and will guarantee choicest goods and best service.

The Chicago plant is of semi-mill construction and has a 150 ft. front in Halsted street, and exceptionally good track facilities. The cellar contains coolers, casing room and grease separation apparatus installed by the U. S. Sanitary Effluents Separating Apparatus, Inc. The power plant is in the rear of the building, as also are the smokehouses.

The first floor comprises spacious and well equipped offices, receiving and shipping room, dry storage, lavatories, lockers and restroom for the women employees. The second floor contains the shipped beef room; lacquering, labeling and packing room for the canned meats; lavatories, lockers and lunch room for the men, and the store room.

The third floor contains the sausage stuffing, meat canning and processing and large insulated drying rooms, with hanging capacity for half a million pounds of sausage. This latter room is equipped with an apparatus for drying, cooling, heating and ventilating, which automatically controls both temperature and humidity, making it possible to manufacture products at any time of the year formerly only made in the winter months.

The insulating material was supplied by the United Cork Companies, and the direct expansion refrigerating equipment by the York Manufacturing Company. Sausage and canning machinery was supplied by the S. Oppenheimer Company, Anchor Cap & Closure Company, Continental Can Company and the Sprague Canning Machinery Company. Other machinery was supplied by the Allbright-Nell Company.

Gardner & Lindberg, architects, drew the plans and superintended the construction of the plant, and also installed the Gardner system of smokehouse control, positively insuring uniform smoking at all times and under all conditions. The plant is the acme of sanitation and gravitation is employed wherever possible. Electric power and light obtain throughout the plant; there are drinking fountains on every floor, and there is also a Government inspectors' office de luxe. The plant employs 150 people.

Chicago Section

The Kernel says—but what doesn't he say?

Doollittle has little to do. Shoot, Gridley!

When you cannot go anywhere else, there's always Paw Paw Lake left!

Sure! Chicago has a mayor—somewhere. Now you see him and now you don't.

The packer might get a square deal were he to become a labor leader.

"Jump through the hoop!" said the Railmaster, and—it jumped!

Board of Trade memberships are now selling around \$6,000 net to the buyer, and going up!

Evidently when the Creator made the rattlesnake species of Mexican He was either tired or careless, or both.

Some people's support (?) of a presidential candidate is worse than their opposition could possibly be—for the candidate.

It is no longer a doubt, it is an assured fact that "a kernel is the inside of a nut." Bring the monkey wrench, Obadiah!

"We're here because we're here," and we ought to be glad of it, even if we haven't any other excuse. Be there—Cincinnati!

Politics makes strange bedfellows, and is also responsible for a multitude of—byways, alleys, back entrances and gum shoes.

Tie their arms and some people couldn't talk at all; cut out the I and Me and some people wouldn't have anything to talk about.

Swift & Company's sales of fresh beef in Chicago for the week ending Saturday, September 2, 1916, averaged for domestic beef, 11.99 cents per pound.

Three of five women are bow-legged, says a leading ballet master. That's why a good-looking face doesn't always break into the chorus! No levity; serious matter.

The eight-hour bill, when all is said and done, goes to prove that the vote is the paramount object, after all. "I didn't want to do it, but you made me do it!"

Swift's Oh-Key-Oh field day on Saturday, September 2, and Tom Wilson's barbecue on Monday, September 4, is the right "Get Together" idea. And it's growing fast.

Apropos of environment, a Mexican is raised among and trains with rattlesnakes, centipedes, cacti, alkali dust, renegade Americans and thugs. No wonder he's a hard customer!

There are slathers of bar-tenders in Chicago, thousands of 'em—yes, tens of thousands, hundreds of thousands of 'em—but they are on the wrong side of the mahogany!

J. B. ZIEGLER & CO.
Greases, Tallows, Oils
Stearines

Tankage, Bones, Hoghair
Consignments Solicited
WEBSTER BLDG., CHICAGO

P. H. Appell, secretary and treasurer of the Swenson Evaporator Company, is one of the Chicago men who went on the battleship cruise starting on August 15. He is in the "Louisiana."

Anyhow, you don't have to pay your good money to see a bally ballet, don'tcherknow. Go thou to the beaches, the municipal pier, State street or Michigan avenue, and get an eyefull—free gratis!

Everybody interested in the packing industry ought to be a member of the American Meat Packers' Association and attend the conventions. In unity is strength. Preparedness first; it makes for safety.

Popular songs: "Knockin' 'I' Outa Kelly" (can't be did!); "Ireland Must Be Heaven!" (raisin' some stir in Heaven just now, and always and ever), and a thousand "I-ah-lo-ho-ho-ho-Hove Yew" ditties, or dottys.

Sigel Hess, for many years head cattle buyer for Morris & Company, died on Friday night, September 1, and was buried at Mount Marrio Cemetery on Sunday. Mr. Hess was one of "The Yards" old-timers, widely known and highly respected.

The utterances of some of our so-called political "leaders" can hardly be classed as commonly decent, much less dignified, and the respect of the great majority of the people for them is on a par with their blatant spleen-infected talk.

There are millions of people in Europe sorry indeed to be mixed up in the war, directly and indirectly, and there are millions here sorry they ain't—so they say. Some people are glad we are not at war, and also that the threatened railroad strike is averted—pro tem, anyhow.

Writing to The National Provisioner on the provision situation W. L. Gregson & Company say: "Increased activity in the old and new futures, large deliveries of lard on September contracts, and a big decrease in stocks making a most favorable comparison for holders compared to a year ago, were all features in the market. Current hog receipts and price fluctuations are having very little effect on the course of values in the cured product, and possible labor disturbances under existing conditions are not likely to prove disastrous to price levels on the product in store. Europe's needs of both meats and lard are imperative, and we think will prove especially so of lard before the season is over."

William Jennings Bryan gives eight good reasons why young men should choose farm-

ing in preference to the other occupations and professions. Here they are: "(1) Farming is the most independent way of living; (2) less capital is required to start farming than to enter any other independent business; (3) all members of the family can participate in some way in the work of the farm; (4) farm life is healthful; (5) farming develops useful habits of industry and application; (6) the farm provides the most wholesome environment for growing children; (7) farm life teaches the true philosophy that labor is honorable and worthy of reward; (8) the farmer is the most independent factor in our political life."

Nevertheless William's pet anthem is, "The Farm May Be Fine, But the Chautauqua for Mine!"

SWIFT EMPLOYEES' BENEFIT DAY.

More than two thousand employees of Swift & Company, the G. H. Hammond Company and the Omaha Packing Company turned out at Comiskey Park on the afternoon of Saturday, September 2, for the second annual "Oh Key Oh" benefit baseball game and field day. An afternoon of music, athletic events, football and baseball provided some lively entertainment. The Aryan Grotto Band, Dr. Homer Drake, conductor, furnished a most excellent musical programme that was thoroughly appreciated. The band donated its services to charity.

One of the chief events of the afternoon was a drill by the South Side Military Club. For thirty minutes these boys gave a snappy exhibition and at the conclusion they were presented with a handsome stand of colors by F. S. Hayward, secretary of Swift & Company, and G. L. Mallery. In the presentation Mr. Mallery said:

"Officers and men of the South Side Military Club: Swift & Company as an evidence of their appreciation of your worthiness and sincerity of purpose in becoming members of this club take this occasion to present you with a stand of the National colors. They are symbolical of the traditions which all Americans revere and are at any cost prepared to maintain righteousness, freedom and justice. They are a gift which any organization should feel honored to receive. Take them then, guard them well and let nothing you may do dim the luster of their glorious memories, keeping ever in mind that

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HENSCHEN & McLAREN
Architects
Old Colony Bldg. Chicago, Ill.
PACKING PLANTS AND COLD STORAGE
CONSTRUCTION.

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PACKERS ARCHITECTURAL & ENGINEERING CO.
—ENGINEERS—
PACKING HOUSES, ABATTOIRS, COLD STORAGE
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DOES your engineer run YOUR refrigerating plant to produce best results using an anhydrous ammonia he knows is best for YOUR interest, or

Must he produce the best results he can with an anhydrous ammonia which is purchased upon a basis OTHER than that of quality?

Your engineer knows that a guaranteed pure and dry anhydrous ammonia made from a strictly mineral base does produce best results.

Only by using such an ammonia can you reduce operating expenses.

Anhydrous **SUPREME** Ammonia

"EVERY OUNCE ENERGIZES"

Fill your requirements.

Used by most of the leading packers throughout the United States.

SUPREME means pure, dry, highest quality anhydrous ammonia.

Less power and less coal = less expense.

Better refrigeration and more satisfaction = greater efficiency.

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Chicago, U. S. Yards

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Boneless Beef Cuts.

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WILLIAMS

Williams Bone Crushers and Grinders are not alone suitable for grinding bone for fertilizer purposes, they are also suitable for crushing bone for glue and case hardening purposes. Every packer having to dispose of his bone whether Green, Raw, or Junk and Steamed bone, will do well to get in touch with Williams.

Williams machines are also suitable for Tankage, Cracklings, Beef Scrap, Oyster and Clam Shells, and any other material found around the packing plant requiring crushing or grinding.

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THE WILLIAMS PAT. CRUSHER & PULVERIZER CO.

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General Sales Dept., Old Colony Bldg.

CHICAGO

268 Market St.,
SAN FRANCISCO

those who would serve them well must assiduously cultivate and earnestly practice the principals of honor, patriotism and subordination."

The second event of the day, a quarter-mile relay race between the City Market teams, was won by City Market Team No. 1, made up of H. Olsen, of the North Halsted Street Market; E. Blair, Hammond, Ind.; M. Weisner, State Street Market, and R. Toemmel. Time, 54 1/5 seconds. The results of other races follow:

Quarter mile relay race between teams

W. B. HULME
BROKER
PACKING HOUSE AND COTTON OIL
PRODUCTS—GREASE AND TALLOW
789 Postal Telegraph Building, Chicago
CODE: Cross Robinson

from Swift & Company's livestock buyers, G. H. Hammond & Company's office and Omaha Packing Company's office, was won by the livestock buyers. The men making

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PORK LARD SHORTRIBS
For Future Delivery
GRAIN Correspondence Solicited **STOCKS**

up the team were A. R. Tabor, G. A. Menaul, J. Tschupp, W. Schroeder; time, 52 seconds. The ladies' relay race, 200 yards, between
(Continued on page 42.)

CHICAGO LIVE STOCK

RECEIPTS.

	Cattle.	Calves.	Hogs.	Sheep.
Monday, Aug. 28.....	12,898	1,088	36,277	27,722
Tuesday, Aug. 29.....	6,258	1,530	17,516	26,444
Wednesday, Aug. 30.....	12,995	1,610	31,577	20,832
Thursday, Aug. 31.....	8,062	1,170	23,771	9,319
Friday, Sept. 1.....	14,908	929	27,829	11,292
Saturday, Sept. 2.....	12,000	200	29,000	13,000
Saturday, Sept. 2.....	12,020	704	30,273	12,292
Total last week.....	67,771	7,635	167,543	107,928
Previous week.....	65,152	8,003	132,307	101,688
Cor. week, 1915.....	48,517	6,309	108,753	85,589
Cor. week, 1914.....	46,902	4,984	103,947	135,511

SHIPMENTS.

	Cattle.	Calves.	Hogs.	Sheep.
Monday, Aug. 28.....	3,343	164	5,580	4,435
Tuesday, Aug. 29.....	1,707	4	1,842	19,941
Wednesday, Aug. 30.....	5,292	156	6,832	8,699
Thursday, Aug. 31.....	3,004	70	4,059	6,756
Friday, Sept. 1.....	1,245	96	805	842
Saturday, Sept. 2.....	188	12	...	164
Total last week.....	14,950	472	17,118	31,837
Previous week.....	16,082	383	15,257	21,488
Cor. week, 1915.....	10,852	637	25,117	4,861
Cor. week, 1914.....	18,735	729	15,550	50,162

CHICAGO TOTAL RECEIPTS LIVESTOCK.

	Cattle.	Hogs.	Sheep.
Year to Sept. 2, 1916.....	1,576,536	5,709,782	2,512,313
Same period, 1915.....	1,493,478	4,872,272	3,161,059
Combined receipts of hogs at eleven points:			
Week ending Sept. 2, 1916.....			466,000
Previous week.....			396,000
Corresponding week, 1915.....			332,000
Corresponding week, 1914.....			373,000
Total year to date.....			19,930,000
Same period, 1915.....			17,586,000
Same period, 1914.....			15,519,000
Receipts at seven points (Chicago, Kansas City, Omaha, St. Louis, St. Joseph, Sioux City, St. Paul) as follows:			
Week to Sept. 2, 1916.....	246,300	378,000	310,800
Previous week.....	233,900	362,700	271,400
Same period, 1915.....	196,400	254,800	310,200
Same period, 1914.....	159,700	276,100	331,200
Combined receipts at seven markets for 1916 to Sept. 2, and same period a year ago:			
1916.....	5,147,000	4,497,000	
1915.....	16,559,000	14,094,000	
1914.....	6,465,000	6,349,000	

CHICAGO PACKERS' HOG SLAUGHTER.

	1916.	1915.
Cattle.....	5,147,000	4,497,000
Hogs.....	16,559,000	14,094,000
Sheep.....	6,465,000	6,349,000
Week ending Sept. 2, 1916:		
Armour & Co.....	29,400	
Swift & Co.....	17,700	
Wilson & Co.....	11,600	
Morris & Co.....	8,500	
Hammond Co.....	10,000	
Western P. Co.....	9,700	
Anglo-American.....	6,100	
Independent P. Co.....	13,500	
Boyd-Lunham.....	5,200	
Roberts & Oake.....	4,800	
Brennan P. Co.....	2,800	
Miller & Hart.....	3,100	
Others.....	12,900	
Totals.....	135,300	
Total last week.....	119,200	
Total corresponding week, 1915.....	85,900	
Total corresponding week, 1914.....	88,000	
Total for 1916 to date.....	5,062,800	
Corresponding period, 1915.....	4,505,700	

WEEKLY AVERAGE PRICE OF LIVESTOCK.

	Cattle.	Hogs.	Sheep.	Lambs.
This week.....	\$9.85	\$10.80	\$7.10	\$10.50
Previous week.....	9.25	10.70	7.25	10.50
Cor. week, 1915.....	9.10	7.05	5.75	8.90
Cor. week, 1914.....	9.25	9.20	5.00	7.40
Cor. week, 1913.....	8.30	8.00	4.25	7.30
Cor. week, 1912.....	8.25	8.34	4.10	6.80
Cor. week, 1911.....	7.10	7.11	3.60	5.00

CATTLE.

Good to choice steers.....	\$9.00@11.35
Yearlings, good to choice.....	8.50@10.50
Fair to good steers.....	7.50@8.50
Range steers.....	7.50@8.50
Stockers and feeders.....	6.50@7.90
Good to choice heifers.....	7.00@9.25
Fair to good cows.....	5.50@7.50

Butcher bulls.....	6.00@7.35
Cutters.....	4.50@5.25
Canners.....	3.00@4.00
Bologna bulls.....	5.50@6.25
Good to prime calves.....	8.00@12.25
Heavy calves.....	7.00@8.00

HOGS.

Prime light butchers.....	\$10.75@11.15
Fair to fancy light.....	10.70@11.30
Prime med. weight butchers, 220-250 lbs.....	10.75@11.15
Prime heavy weight butchers, 250-320 lbs.....	10.70@11.05
Heavy mixed packing.....	10.55@10.80
Rough heavily mixed packing.....	10.25@10.90
Pigs, fair to good.....	8.25@9.75
Stags (subject to 80 lbs. dockage).....	9.25@10.25

SHEEP.

Yearlings.....	\$8.00@9.25
Fair to choice ewes.....	6.00@7.50
Breeding ewes.....	7.25@8.20
Wethers, fair to choice.....	7.00@7.60
Western lambs.....	10.00@10.60
Native lambs.....	9.00@10.40

CHICAGO PROVISION MARKETS

Range of Prices.

SATURDAY, SEPTEMBER 2, 1916.

	Open.	High.	Low.	Close.
PORK—(Per bbl.)—				
September.....	\$27.40	\$27.60	\$27.40	\$27.60
October.....	26.60	26.75	26.55	26.75
December.....	24.85	25.00	24.85	25.00
January.....	24.55	24.92	24.55	24.90
LARD—(Per 100 lbs.)—				
September.....	14.42	14.52	14.40	14.50
October.....	14.22	14.45	14.22	14.45
December.....	13.85	14.15	13.85	14.05
January.....	13.90	14.05	13.90	14.00
RIBS—(Boxed, 25c. more than loose)—				
September.....	14.42	14.60	14.22	14.60
October.....	14.20	14.37	14.20	14.37
January.....	13.02	13.17	13.02	13.17

MONDAY, SEPTEMBER 4, 1916.

Holiday.

TUESDAY, SEPTEMBER 5, 1916.

PORK—(Per bbl.)—				
September.....	27.70	27.75	27.70	27.75
October.....	26.85	26.85	26.85	26.90
December.....	24.90	25.00	24.85	24.97
January.....	24.90	24.90	24.80	24.80
LARD—(Per 100 lbs.)—				
September.....	14.50	14.60	14.45	14.55
October.....	14.50	14.55	14.42	14.52
December.....	14.15	14.15	14.10	14.12
January.....	14.07	14.12	14.07	14.10
RIBS—(Boxed, 25c. more than loose)—				
September.....	14.52	14.57	14.45	14.57
October.....	14.37	14.47	14.27	14.30
January.....	13.17	13.22	13.15	13.15

WEDNESDAY, SEPTEMBER 6, 1916.

PORK—(Per bbl.)—				
September.....	27.80	27.80	27.75	27.75
October.....	27.00	27.20	26.90	27.00
December.....	24.90	24.90	24.90	24.90
January.....	24.85	24.85	24.80	24.80
LARD—(Per 100 lbs.)—				
September.....	14.00	14.60	14.52	14.55
October.....	14.55	14.57	14.50	14.50
December.....	14.15	14.17	14.10	14.15
January.....	14.17	14.17	14.07	14.10
RIBS—(Boxed, 25c. more than loose)—				
September.....	14.55	14.65	14.55	14.65
October.....	14.30	14.35	14.30	14.35
January.....	13.20	13.20	13.12	13.15

THURSDAY, SEPTEMBER 7, 1916.

PORK—(Per bbl.)—				
September.....	27.77	27.77	27.65	27.65
October.....	27.00	27.00	27.00	27.00
December.....	24.80	25.15	24.70	25.00
January.....	24.70	24.90	24.62	24.75
LARD—(Per 100 lbs.)—				
September.....	14.55	14.55	14.40	14.42
October.....	14.52	14.52	14.32	14.42
December.....	14.15	14.15	13.97	14.07
January.....	14.02	14.02	13.95	14.00
RIBS—(Boxed, 25c. more than loose)—				
September.....	14.50	14.50	14.37	14.50
October.....	14.35	14.35	14.27	14.27
January.....	13.12	13.12	13.07	13.10

FRIDAY, SEPTEMBER 8, 1916.

PORK—(Per bbl.)—				
September.....	27.50	27.50	27.50	27.50
October.....	26.85	26.85	26.70	26.70
December.....	24.20	24.50	24.20	24.50
LARD—(Per 100 lbs.)—				
September.....	14.35	14.35	14.22	14.22
October.....	14.37	14.37	14.20	14.20
December.....	14.00	14.02	13.95	13.97
RIBS—(Boxed, 25c. more than loose)—				
September.....	14.40	14.45	14.40	14.45
October.....	14.22	14.22	14.17	14.17
January.....	13.07	13.07	12.87	12.87

†Bld. †Asked.

CHICAGO RETAIL FRESH MEATS.

(Corrected weekly by Pollack Bros., 41st and Halsted Streets.)

Beef.

Native Rib Roast.....	20	@25
Native Sirloin Steaks.....	25	@28
Native Porterhouse Steaks.....	30	@35
Native Pot Roasts.....	16	@18
Rib Roasts from light cattle.....	14	@18
Beef Stew.....	12	@14
Boneless Corned Briskets, Native.....	16	@18
Corned Rump, Native.....	16	@18
Corned Ribs.....	11	@12½
Corned Flanks.....	12	@12½
Round Steaks.....	13	@25
Round Roasts.....	10	@18
Shoulder Steaks.....	18	@20
Shoulder Roasts.....	14	@16
Shoulder Neck End, Trimmed.....	12½	@18
Boned Roast.....	16	@18

Lamb.

Hind Quarters, fancy.....	22	@25
Fore Quarters, fancy.....	18	@20
Legs, fancy.....	22	@25
Stew.....	14	@14
Chops, shoulder, per lb.....	20	@20
Chops, rib and loin, per lb.....	35	@35
Chops, French, each.....	13	@13

Mutton.

Legs.....	20	@22
Stew.....	12½	@14
Shoulders.....	16	@18
Hind Quarters.....	20	@22
Fore Quarters.....	15	@17
Rib and Loin Chops.....	25	@28
Shoulder Chops.....	18	@20

Pork.

Pork Loin.....	22	@25
Pork Chops.....	25	@25
Pork Shoulders.....	18	@18
Pork Tenderloins.....	35	@35
Pork Butts.....	20	@20
Spare Ribs.....	12½	@12½
Hocks.....	11	@12½
Pigs' Heads.....	8	@8
Leaf Lard.....	16	@16

Veal.

Hind Quarters.....	20	@22
Fore Quarters.....	14	@16
Legs.....	20	@22
Breasts.....	14	@16
Shoulders.....	18	@20
Cutlets.....	35	@35
Rib and Loin Chops.....	28	@30

Butchers' Offal.

Suet.....	7	@7
Tallow.....	4	@4
Bones, per cwt.....	75	@75
Calfskins, 8 to 15 lbs. (dressed).....	29	@29
Calfskins, under 18 lbs. (dressed).....	65	@65
Kips.....	22½	@22½

Watch Page 48 for
Business Chances

STERNE & SON CO.

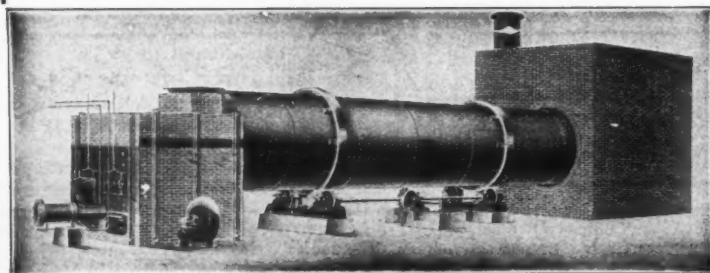
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Economical Efficient
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SAVING IN LABOR ALONE IN ONE YEAR WILL
OFFSET COST TO INSTALL

For Tankage, Blood, Bone, Fertilizer, all Animal and
Vegetable Matter. Installed in the largest packing-
houses, fertilizer and fish reduction plants in the world.

Send for Catalogue T. B.

American Process Co.
68 William St., - - New York

CHICAGO MARKET PRICES

WHOLESALE FRESH MEATS.
Carcass Beef.

Prime native steers	13 1/2 @ 15 1/2
Good native steers	12 1/2 @ 14 1/2
Native steers, medium	12 1/2 @ 13 1/2
Heifers, good	12 @ 13
Cows	9 1/2 @ 12
Hind Quarters, choice	@ 17
Fore Quarters, choice	@ 12

Beef Cuts.

Beef Tenderloins, No. 1	@ 35
Beef Tenderloins, No. 2	@ 32
Steer Loins, No. 1	@ 25
Steer Short Loins, No. 1	@ 30
Steer Loins, No. 2	@ 19
Steer Short Loins, No. 2	@ 28
Cow Loins	12 1/2 @ 15 1/2
Cow Short Loins	17 1/2 @ 19
Steer Loin Ends (hips)	@ 21
Cow Loin Ends (hips)	@ 15
Striplin Butts, No. 3	16 1/2 @ 19 1/2
Strip Loins, No. 3	@ 14 1/2
Steer Ribs, No. 1	@ 19
Steer Ribs, No. 2	@ 17 1/2
Cow Ribs, No. 1	@ 16
Cow Ribs, No. 2	@ 15
Cow Ribs, No. 3	@ 10
Rolls	13 1/2 @ 15 1/2
Steer Rounds, No. 1	@ 15 1/2
Steer Rounds, No. 2	@ 14 1/2
Cow Rounds	@ 12
Flank Steak	@ 15
Rump Butts	@ 12
Steer Chucks, No. 1	@ 12
Steer Chucks, No. 2	@ 10 1/2
Cow Chucks	@ 8 1/2
Boneless Chucks	@ 10 1/2
Steer Plates	@ 10
Medium Plates	@ 9 1/2
Briskets, No. 1	@ 13
Briskets, No. 2	@ 11
Shoulder Clods	@ 13 1/2
Steer Navel Ends	@ 9
Cow Navel Ends	@ 8 1/2
Fore Shanks	@ 7 1/2
Hind Shanks	@ 6 1/2
Hanging Tenderloins	@ 12
Trimnings	@ 11

Beef Offal.

Brains, per lb.	7 @ 7 1/2
Hearts	8 1/2 @ 9
Tongues	@ 17
Sweetbreads	@ 20
Ox Tail, per lb.	7 1/2 @ 8
Fresh Tripe, plain	@ 4 1/2
Fresh Tripe, H. C.	@ 7 1/2
Livers	@ 7 1/2
Kidneys, each	@ 5 1/2

Veal.

Heavy Carcass, Veal	12 1/2 @ 15
Light Carcass	17 1/2 @ 19
Good Carcass	18 1/2 @ 19 1/2
Good Saddles	@ 21
Medium Racks	@ 13
Good Racks	@ 15

Veal Offal.

Brains, each	@ 7 1/2
Sweetbreads	@ 45
Calf Livers	@ 21
Heads, each	@ 25

Lambs.

Good Caul Lambs	@ 16
Round Dressed Lambs	@ 19
Saddies, Caul	@ 17
R. D. Lamb Fores	@ 17
Caul Lamb Fores	@ 15
R. D. Lamb Saddles	@ 21
Lamb Fries, per lb.	@ 20
Lamb Tongues, each	@ 4
Lamb Kidneys, per lb.	@ 12

Mutton.

Medium Sheep	@ 13
Good Sheep	@ 14
Medium Saddles	@ 14 1/2
Good Saddles	@ 16
Good Fores	@ 12
Medium Racks	@ 10
Mutton Legs	@ 13 1/2
Mutton Loins	@ 13
Mutton Stew	@ 9
Sheep Tongues, each	@ 2 1/2
Sheep Heads, each	@ 10

Fresh Pork, Etc.

Dressed Hogs	@ 16 1/2
Pork Loins	@ 21 1/2
Leaf Lard	@ 14 1/2
Tenderloins	@ 20
Spare Ribs	@ 11 1/2
Butts	@ 18
Hocks	@ 10
Trimnings	@ 12 1/2
Extra Lean Trimnings	@ 7 1/2
Tails	@ 6
Snouts	@ 6
Pigs' Feet	@ 4
Pigs' Heads	@ 6 1/2
Blade Bones	@ 9
Blade Meat	@ 9
Cheek Meat	@ 9
Hog Livers, per lb.	2 1/2 @ 3
Neck Bones	@ 3 1/2
Skinless Shoulders	@ 15
Pork Hearts	@ 9
Pork Kidneys, per lb.	@ 6
Pork Tongues	@ 14
Sillp Bones	@ 5
Tail Bone	@ 6
Brains	@ 5 1/2
Backfat	@ 13
Hams	@ 17 1/2
Culms	@ 13 1/2

Bellies	@ 17
Shoulders	@ 14 1/2

SAUSAGE.

Columbia Cloth Bologna	@ 11 1/2
Bologna, large, long, round, in casings	@ 11 1/2
Choice Bologna	@ 13
Frankfurters	@ 15
Liver, with beef and pork	@ 11
Tongue	@ 15 1/2
Minced Sausage	@ 15
New England Sausage	@ 18
Prepared Luncheon Sausage	@ 18
Special Compressed Sausage	@ 15 1/2
Berliner Sausage	@ 15 1/2
Oxford Lean Butts	@ 23 1/2
Polish Sausage	@ 14
Garlic Sausage	@ 14
Country Smoked Sausage	@ 14 1/2
Country Sausage, fresh	@ 16
Pork Sausage, bulk or link	@ 14
Pork Sausage, short link	@ 14 1/2
Boneless lean butts in casings	@ 20 1/2
Luncheon Roll	@ 18
Deli-cassens Loaf	@ 15
Jellied Roll	@ 18

Summer Sausage.

Best Summer H. C. (new)	@ 27 1/2
German Salami	@ 28 1/2
Italian Salami (new goods)	@ 27 1/2
Holsteiner	@ 20 1/2
Mettwurst	@ 19 1/2
Farmer	@ 21 1/2

Sausage in Brine.

Bologna, kitta	@ 1.60
Bologna, 1/4 @ 1/2	2.00 @ 7.70
Pork link, kitta	@ 2.05
Pork links, 1/4 @ 1/2	2.60 @ 10.45
Polish sausage, kitta	@ 1.75
Polish sausage, 1/4 @ 1/2	2.20 @ 8.80
Frankfurts, kitta	@ 1.75
Frankfurts, 1/4 @ 1/2	2.30 @ 8.80
Blood sausage, kitta	@ 1.60
Blood sausage, 1/4 @ 1/2	2.00 @ 7.70
Liver sausage, kitta	@ 1.60
Liver sausage, 1/4 @ 1/2	2.00 @ 7.70
Head Cheese, kitta	@ 1.60
Head Cheese, 1/4 @ 1/2	2.00 @ 7.70

VINEGAR PICKLED GOODS.

Pickled Pigs' Feet, in 200-lb. barrels	\$19.15
Pickled Plain Tripe, in 200-lb. barrels	10.25
Pickled H. C. Tripe, in 200-lb. barrels	12.40
Pickled Ox Liver, in 200-lb. barrels	21.00
Pickled Pork Sausage, in 200-lb. barrels	22.00
Sheep Tongues, Short Cut, barrels	55.00

CORNED, BOILED AND ROAST BEEF.

No. 1, 2 doz. to case	Per doz. \$2.15
No. 2, 1 or 2 doz. to case	4.15
No. 6, 1 doz. to case	14.50
No. 14, 1/2 doz. to case	41.50

EXTRACT OF BEEF.

2-oz. jars, 1 doz. in box	Per doz. \$2.85
4-oz. jars, 1 doz. in box	5.70
8-oz. jars, 1/2 doz. in box	10.75
16-oz. jars, 1/2 doz. in box	20.00

BARBELED BEEF AND PORK.

Extra Plate Beef, 200-lb. barrels	@ 21.50
Plate Beef	@ 21.00
Prime Mess Beef	@ 21.00
Mess Beef	@ 20.50
Beef Hams (220 lbs. to bbl.)	—
Rump Butts	@ 23.50
Mess Pork	@ 29.00
Clear Fat Backs	@ 28.50
Family Back Pork	@ 29.00
Bean Pork	@ 26.00

LARD.

Pure lard, kettle rendered, per lb., tes.	@ 18 1/4
Pure lard	@ 15 1/2
Lard, substitute, tes.	@ 12 1/4
Lard, compound	@ 12
Cooking oil, per gal., in barrels	@ 82
Cooks' and bakers' shortening tubs	@ 15 1/2
Barrels, 1/4c. over tierces, half barrels, 1/4c. over tierces; tubs and pails, 10 to 80 lbs., 1/4c. to 1c. over tierces.	

BUTTERINE.

1 to 6, natural color, solids, f. o. b. Chi.	15 1/2 @ 23
Cartons, rolls or prints, 1 lb.	16 1/2 @ 22
Cartons, rolls or prints, 2 @ 5 lbs.	16 @ 22 1/2
Shortenings, 30 @ 60 lb. tubs	12 1/2 @ 15 1/2

DRY SALT MEATS.

(Boxed. Loose are 1/4c. less.)	
Clear Bellies, 14 @ 16 avg.	@ 17 1/2
Clear Bellies, 18 @ 20 avg.	@ 17 1/2
Rib Bellies, 20 @ 25 avg.	@ 17 1/2
Fat Backs, 10 @ 12 avg.	@ 14
Fat Backs, 12 @ 14 avg.	@ 14 1/2
Fat Backs, 14 @ 16 avg.	@ 14 1/2
Extra Short Clears	@ 15 1/2
Extra Short Ribs	@ 16 1/2
D. S. Short Clears, 20 @ 25 avg.	@ 16 1/2
Butts	@ 13 1/4
Bacon meats, 1/4c. more.	

WHOLESALE SMOKED MEATS.

Hams, 12 lbs., avg.	@ 20
Hams, 16 lbs., avg.	@ 19 1/4
Skinless Hams	@ 21 1/4
Calas, 4 @ 6 lbs., avg.	@ 14
Calas, 6 @ 12 lbs., avg.	@ 14
New York Shoulders, 8 @ 12 lbs., avg.	@ 16
Breakfast Bacon, fancy	@ 20
Wide, 10 @ 12 avg., and strip, 5 @ 6 avg.	@ 19 1/2
Wide, 6 @ 8 avg., and strip, 3 @ 4	@ 20 1/2
Rib Bacon, wide, 8 @ 12 av., and strip, 4 @ 6	@ 16 1/4
Dried Beef Sets	@ 20

Dried Beef Inside	@ 32 1/2
Dried Beef Knuckles	@ 28 1/2
Dried Beef Outsides	@ 28
Regular Boiled Hams	@ 28
Smoked Boiled Hams	@ 30
Boiled Calas	@ 21
Cooked Loin Rolls	@ 35
Cooked Rolled Shoulder	@ 21

SAUSAGE CASINGS.

F. O. B. CHICAGO.

Beef rounds, per set	@ 13
Beef exports, rounds	@ 20
Beef middles, per set	@ 45
Beef bungs, per piece	@ 15
Beef weasands	@ 7 1/2
Beef bladders, medium	@ 60
Beef bladders, small, per doz.	@ 75
Hog casings, free of salt	@ 50
Hog middles, per set	@ 10
Hog bungs, export	@ 16
Hog bungs, large	@ 7 1/2
Hog bungs, prime	@ 6
Hog bungs, narrow	@ 3
Hog stomachs, per piece	@ 4
Imported wide sheep casings	•
Imported medium wide sheep casings	•
Imported medium sheep casings	•

*Owing to unsettled war conditions reliable sheep casing quotations cannot be given.

FERTILIZERS.

Dried blood, per unit	3.10 @ 3.15
Hoof meal, per unit	2.70 @ 2.80
Concentrated tankage, ground	2.75 @ 2.80
Ground tankage, 12%	3.00 @ 3.10
Ground tankage, 15%	3.00 @ 3.10
Ground tankage, 9 and 20%	2.85 @ 3.00
Crushed tankage, 9 and 20%	2.60 @ 2.85
Ground tankage, 6 1/2 and 30%	24.00 @ 25.00
Ground raw bone, per ton	27.00 @ 28.00
Ground steam bone, per ton	23.00 @ 23.50

HORNS, HOOF AND BONES.

Horns, No. 1, 65 @ 70 lbs. aver.	140.00 @ 150.00
Hoofs, black, per ton	30.00 @ 31.00
Hoofs, striped, per ton	30.00 @ 31.00
Hoofs, white, per ton	45.00 @ 50.00
Flat shin bones, 40 lbs. aver., per ton	50.00 @ 60.00
Round shin bones, 35-40 lbs. av., per ton	50.00 @ 60.00
Round shin bones, 50-52 lbs. av., per ton	60.00 @ 70.00
Long thigh bones, 90-95 lbs. av., per ton	80.00 @ 90.00
Skulls, jaws and knuckles, per ton	33.00 @ 35.00

LARD.

Prime steam, cash	@ 14.60
Prime steam, loose	@ 14.30
Leaf	@ 13 1/4
Compound	@ 11
Neutral lard	15 1/2 @ 16

STEARINES.

Prime oleo	11 1/2 @ 11 1/4
Tallow	10 @ nom
Grease, yellow	8 @ 8 1/4
Grease, A white	8 1/2 @ 9

OILS.

Oleo 60, extra	14 @ 14 1/4
Oleo oil, No. 2	13 1/2 @ 13 1/4
Oleo stock	12 1/4 @ 12 1/2
Lined, blbls.	@ 670
Corn oil, loose	7 1/2 @ 8

TALLOW.

Edible	9 1/2 @ 9 1/4
Prime City	9 1/4 @ 9 1/4
Prime Country	9 @ 9 1/4
Packers' Prime	8 1/2 @ 9
Packers' No. 1	8 1/2 @ 8 1/2
Packers' No. 2	7 1/2 @ 8

GREASES.

White, choice	9 1/2 @ 9 1/4
White, "A"	8 1/2 @ 9
White, "B"	8 @ 8 1/4
Bone	@ 8 1/4
Crackling	@ 8 1/4
House	@ 7 1/2
Yellow	7 1/2 @ 8 1/4
Brown	6 1/2 @ 6 3/4
Glycerine, C. P.	36 @ 38
Glycerine, dynamite	33 @ 35
Glycerine, crude soap	23 @ 25
Glycerine, candle	@ 26

COTTONSEED OILS.

P. S. Y., loose	@ 60
P. S. Y., soap grade	@ 68
Soap stock, blbls., concn., 62 @ 65% f. a.	@ 4
Soap stock, loose, reg., 50% f. a.	2 @ 2 1/4

COOPERAGE.

Ash pork barrels, black iron hoops	1.05 @ 1.10
Oak pork barrels, black iron hoops	1.15 @ 1.20
Ash pork barrels, galv. iron hoops	1.25 @ 1.30
Red oak lard tierces	1.50 @ 1.52 1/2
White oak lard tierces	1.75 @ 1.80
White oak ham-curing tierces, k. l. hoops	1.90 @ 2.00

CURING MATERIALS.

Refined saltpetre	@ 25
Refined nitrate of soda, car lots f. o. b. N. Y.	5 @ 5 1/4
Boric acid, crystal to powdered	11 1/2 @ 15
Borax	6 1/2 @ 7 1/2
Sugar—	
White, clarified	—
Plantation, granulated	@ 6 1/4
Yellow, clarified	@ 6 1/4

Ashton, in sacks, 224 lbs.	2.50
Ashton, car lots, per sack	2.35
English packing, T. H. & Co., car lots, per sack	1.72
English packing, Cheshire, car lots, per sack	1.65
English packing, pure dried vacuum, per sack	1.57
English packing, Liverpool ground alum, per sack	1.40
Michigan, granulated, car lots, per ton	3.81
Michigan, medium, car lots, per ton	4.31
Casing salt, 250 lbs., 2x @ 2x, car lots, per bbl.	1.37

Prices f. o. b. Chicago.

Retail Section

PRACTICAL TALKS WITH SHOP BUTCHERS

A System of Accounts for Retail Merchants

(Continued from last week.)

General Cash Book.

This book is for recording all cash transactions. The left hand, or debit, side is for recording receipts, and columns should be headed as follows, in the order named: Date, Name of Account, Description, Ledger Folio or LF, Collections on Accounts Receivable, Cash Sales and General Accounts. The right hand, or credit, side is for recording payments, and these columns should be headed: Date, Name of Account, Description, Check No., Ledger Folio or LF, Discount on Purchases, Payments on Accounts Payable, and General Accounts.

The total cash receipts of each day should be deposited daily in bank and all payments should be made by check. The total of cash sales for the month should be checked against the total of cash sales tickets, and is then posted to the credit of "Sales," that of the "Collections on Accounts Receivable" to the credit of "Accounts Receivable account" and that of "Payments on Accounts Payable" to the debit of "Accounts Payable account." The total of the Discount on Purchases column is also posted to the debit of Accounts Payable.

All payments for expense items other than petty cash should be entered on the cash book as made and posted therefrom to the proper accounts. At the end of the month all expense bills for the month should be paid, so as to insure the expense being charged in the proper month.

Petty cash disbursements, such as car tickets, telegrams, and such minor items for which it is not expedient to draw checks, should be handled as follows:

A check should be drawn for an amount sufficient to cover petty disbursements for a definite period. At the end of the period the cashier should prepare his petty cash statement, which should be supported by vouchers, and a check drawn for the exact amount of the statement, thereby restoring the petty cash fund to the original amount. This check should be entered in the cash book in the regular way, charging the various expense accounts as shown by the petty cash statement.

The balance of the general cash book at all times should check with the balance as shown by the check book plus the amount advanced for petty cash.

In the check book keep checks and deposits footed separately. When the bankbook is balanced, check up the bank list, then rearrange the checks in numerical order, and check with the stubs. If any checks are outstanding, note them on the stub and deduct from total of checks drawn; the check book balance will then agree with the bankbook balance.

Invoice Book and Sales and Credit Tickets.

The invoice book contains the record of

the invoices or purchases of merchandise only and should carry the following headings: Date of Entry, Date of Invoice, Number of Invoice, From Whom Purchased, Address, Ledger Folio or LF, and Amount of Invoice.

The postings are made direct from this book into the Purchase Ledger and the total at the end of the month carried to the debit of Merchandise Purchases and to the credit of Accounts Payable.

Where the business is departmentalized a more elaborate form of Invoice Book should be used, giving departmental subdivisions of purchases.

The use of sales and credit tickets for recording sales and sales returns has become almost universal.

A sales ticket must be made out for every sale and the daily total of these gives the sales for the day. The cash sales tickets are checked against the cash received and the charge tickets go to the bookkeeper. Credit tickets must be made out for credits to customers and these likewise go to the bookkeeper.

Ledger.

The accounts in the ledger should be arranged in the following order:

1. General accounts,
2. Accounts with trade creditors,
3. Accounts with trade debtors,

allotting to each class such space in the ledger as may be necessary.

The general accounts should be arranged in logical order. (See arrangement of accounts.)

Accounts with trade creditors and with

trade debtors should be arranged alphabetically, using preferably a loose leaf ledger.

Where the volume of business permits, it is advisable to use three ledgers, a general ledger, a purchase ledger, and a sales ledger, keeping controlling accounts of the purchase ledger and the sales ledger in the general ledger.

Where only one ledger is used it should be divided into three sections corresponding with the above.

The balances of the purchase ledger and of the sales ledger, or of these sections of the ledger if only one book is used, must agree with the balances of the Accounts Payable account and of the Accounts Receivable account. The advantage of these controlling accounts is that the aggregate of accounts payable and of accounts receivable can be had at any time without listing the balances of the individual accounts.

Customers are charged with goods purchased direct from the charge tickets. These tickets are first listed, then turned over to the bookkeeper, who posts them to the debit of the proper accounts, listing the amounts as he posts, then comparing his total with that of the first list, which must agree. Credit entries for allowances, reductions, cash discounts, or returned goods, are made from credit tickets in exactly the same manner.

Posting to the ledger therefore must come from one of four sources—the cash book, the journal, the invoice book, or the sales and credit tickets.

(To be continued.)

LOCAL AND PERSONAL.

Fire destroyed the Shagren Meat Market at Ocean Park, Wash.

Edward A. Beauchemin has opened a market on Central avenue, Dover, N. H., and will handle meats, fish, groceries, provisions, etc.

Marshall P. Ryder, formerly in the meat business, died at his home in Plainville, Conn., from heart disease.

John McCarthy's meat market at Averill Park, N. Y., has been destroyed by fire.

A grocery and meat market will be opened on Fruit street, Florence, Mass., by M. A. Paddock.

Barrier's butcher shop, 111 Franklin street, Worcester, Mass., has been burglarized.

The co-operative delivery system is being investigated by the retail merchants of Wilmette, Ill., with the object of establishing it in that place.

Arch Gordon's meat market on East Market street, Bluffton, Ind., has been discontinued.

E. May's meat and grocery market at Pleasanton, Kan., has been purchased by Dickinson & Rader.

A meat market will be opened at Hunter, Mo., by George Nord.

A meat market will be opened at Twelfth and Maine streets, Quincy, Ill., by William H. Thompson, formerly of Bowen, Ill.

Charles Huebner's meat market in Waupaca, Wisc., has been purchased by Henry Indestad.

FEDERAL TRADE COMMISSION.

Washington, D. C., July 15, 1916.

To the Retail Merchant:

The Federal Trade Commission has found that the majority of retail merchants do not know accurately the cost of conducting their business, and for this reason they are UNABLE TO PRICE THEIR GOODS INTELLIGENTLY.

There must be decided improvement in this direction before competition can be placed upon a sound basis and before we can expect a decrease in the heavy business death rate among retail merchants.

With the object of aiding retail merchants to improve their accounting methods we have outlined a simple system of accounts which provides for supplying the information necessary to properly direct a retail business. I commend it to your attention and feel satisfied that if you will read it carefully you will find many helpful suggestions.

It has been prepared under my direction by Mr. Robert E. Belt, Chief Accountant, and Mr. R. W. Gardner, Assistant. Trusting we may have your hearty co-operation, I am,

Very respectfully yours,

EDWARD N. HURLEY, Chairman.

Philip Walters bought the Biever meat market in Leonard, North Dakota.

C. H. Weimer bought the Christensen meat market at 107 North Washington street, Green Bay, Wisc.

A. R. Ferron opened a meat market at Madoc, Mont.

Porter & Son have been succeeded in the meat business at Allerton, Iowa, by G. G. Porter.

A meat market will be opened at Glenwood, Minn., by Henry Christensen & Ed. Koch.

Loeffler & Cairney opened a meat business at Morris, Minn.

Kritzeck & Miller, who conducted a meat market at Paynesville, Minn., have dissolved partnership. M. C. Kritzeck will continue in the business.

J. J. Salfer opened a meat market at Dodson, Mont.

John Senger took over the meat market in Cody, Nebr.

H. P. McDaniel bought the Schram meat market in Lewiston, Nebr.

R. E. Purcel and E. Franz have purchased the W. A. Sickler meat market in Lushon, Nebr.

George Davis opened a meat market at Taylor, N. D.

Zenor & Newton have purchased a meat market in Wessington, S. D.

Alois Zaglauer and Andrew Feldmeyer opened a meat market at 709 Appleton street, Appleton, Wisc.

Charles Morice, who conducts a meat and grocery market in Madison, Wisc., was killed by an unknown assailant.

John J. Hankey bought the grocery and meat market in Waukesha, Wisc., formerly conducted by W. H. Oates.

H. P. McDaniel bought the City Meat Market in Lewiston, Nebr., formerly conducted by H. G. Warnke.

Ray Hanley has been admitted to the meat and grocery firm of J. R. Boyle & Co., at Midas, Nev.

John Belton has opened a butcher shop in the store of Matthews, Wilson & Co., Hominy, Okla.

A meat market will be opened at Bradley, Ill., by L. D. Ullon.

Arthur Martin will open a meat and grocery market in Bradley, Ill.

S. Owen has closed his butcher shop in Lahoma, Okla.

Fire destroyed the Kern Street Market, Tulare, Calif.

Walter Wilson has been succeeded in the meat business at Tempe, Texas, by Wilson & Jackson.

Sawyer Bros. meat market at Bismarck, Mo., has been purchased by O. E. Hansbrough.

Charles H. Rindelman, who conducts a meat market at 3127 Lisbon avenue, Milwaukee, Wisc., is retiring from business.

Mrs. M. E. Sauerwein will continue the Sauerwein meat and grocery business at Crookston, Nebr.

Chas. Dorias, whose meat market in Marquette, Mich., was recently burned, has resumed business.

The Johnson meat market, on North Burdick street, Kalamazoo, Mich., has been damaged by fire.

William Somers has purchased the meat business of Barnhart Bros. in Wayland, Mich.

James E. Decker has succeeded to the meat business in Hillsdale, Mich., of Decker & Rogers.

Chas. Fastier, of Ritzville, has engaged in the meat business at Northport, Wash.

W. J. Haynes has opened a new butcher shop in Townsend, Mont.

Frank Quinlan has purchased the butcher shop in Pendleton, Ore., of J. S. Rogers.

The R. A. Schultz meat market, in the Farris store, Norfolk, Neb., has been closed on account of the sale of the store.

Herman Gerdeman has purchased an interest in the Excelsior Meat Market, Plattsmouth, Neb., of M. J. Johnson.

E. Woodruff has purchased the butcher shop of Geo. Derleth, in Ashland, Neb., and it will in future be known as the Golden Rule Meat Market.

C. R. Gray has purchased an interest in the meat and grocery business in Redlands, Cal., of M. Barron.

M. Karth is adding a line of groceries to the City Meat Market, Fairburn, Neb.

The meat firm of Nisson & Looft in McCallsburg, Iowa, has dissolved partnership. N. E. Looft has purchased L. W. Hendricks' meat market in Huxley, Iowa.

A new brick building is being erected in Emmetsburg, Iowa, in which Mr. Buchanan will open a meat market.

A new meat market has been opened on Railroad avenue, Stamford, N. Y., by E. K. Pierce.

A meat market has been opened in the Robertson block, Main street, Stamford, N. Y., by Mayes & Todd.

CHICAGO LIVESTOCK MARKET.

(Continued from page 31.)

weights at \$11.25@11.40, top \$11.50; a good class of light and butcher-weight mixed \$11@11.20; fair to good packing grades \$10.40@10.70; rough heavy packers and thin kinds \$9.50@10; light pigs \$8@8.50, and strong-weight corn-fed pigs \$9@9.25.

Following the erratic fluctuations of last week the sheep and lamb trade has settled into a more firm and stable channel. Receipts consist largely of Western stock, which up to the present time contain a small proportion of feeders. The supply of feeding stock continues so moderate that the high prices inaugurated several weeks ago are still being paid. We quote: Westerns: Good to choice lambs, \$10.65@10.85; killing yearlings, \$8.40@8.75; fat wethers, \$8@8.25; fat ewes, \$7.50@7.75; feeding lambs, \$10@10.25; feeding yearlings, \$7.50@8; feeding wethers, \$6.75@7; feeding ewes, \$5.50@6; yearling breeding ewes, \$10@10.50. Natives: Good to choice lambs, \$10.50@10.65; Poor to medium, \$9.75@10.25; culls, \$8@9; fat yearlings, \$8.25@8.75; fat ewes, \$7@7.50; poor to medium, \$6@6.75; culls, \$4.50@5; fair to choice breeding ewes, \$8.25@9.

CATTLE PER CAPITA POPULATION.

(Continued from page 16.)

Madagascar.—The development of the beef cattle industry and in a less degree of the slaughtering industry on this island has caused a rapid increase of cattle per capita. In 1898 the ratio was 0.89 of one animal, in 1907 it was 1.29 animals, in 1909 it was 1.37 animals, in 1910 and 1911 it was 1.47 animals and in 1912 the ratio was 1.7 animals.

Mexico.—For the solitary year for which information is possessed, 1902, the per capita ratio of cattle was 0.37 of one animal.

Netherlands.—There was a decline of per capita number of cattle in the Netherlands, subject to some fluctuations, from 0.34 of one animal in 1890 to 0.31 of one animal in 1904. During this period the number of animals was taken in December, but in 1910 the number was determined in June and the per capita ratio was 0.34 of one animal, or slightly greater than in 1904.

The number of cows per capita has declined from 1890 to 1910, or from 0.2 to 0.18 of one animal.

New Zealand.—The ratio of cattle to population constantly increased on this island from 1891 to 1906, or from 1.24 animals to 2.05 animals; a decline followed to 1.85 animals in 1909, and the ratio for 1911 was 2.01 animals.

Dairy cows have increased per capita from 0.33 of one animal in 1891 to 0.63 of one animal in 1911, without showing the fluctuations appearing in the case of other cattle.

Norway.—From 1890 to 1900 the per capita number of cattle declined from 0.5 to 0.42 of one animal, but an increase followed to 0.47 of one animal in 1907 and 1910.

Paraguay.—According to the census of 1899, there were 3.61 cattle per capita of the population. Subject to some doubts as to the accuracy of the estimates of cattle subsequent to that year, it appears that the per capita ratio in 1912 was 4.38 animals.

Portugal.—The only years for which information is possessed are 1906 and 1908, for which the per capita number of cattle was 0.13 and 0.16 of one animal, respectively.

Roumania.—The ratio of cattle to population has varied in this country from 0.47 of one animal in 1890 to 0.37 in 1896, to 0.42 in 1900 and to 0.38 of one animal in 1911.

Russia, Asiatic.—From 1905 to 1910 the per capita ratio of cattle increased from 0.26 of one animal to 0.59, but the ratio fell to 0.54 of one animal in 1911.

Russia, European.—From 1890 to 1913 the per capita number of cattle declined within this vast region, and the decline is more marked in recent years. In the former year the ratio was 0.32 of one animal, in 1912 and 1913 it was 0.25.

Servia.—This is another country with a declining ratio of cattle per capita. This ratio was 0.38 of one animal in 1890 and in 1900; it was 0.36 of one animal in 1905, and 0.33 of one animal in 1910.

Spain.—This country had a per capita ratio of cattle varying only from 0.11 to 0.13 of one animal from 1891 to 1912, with the larger ratios in the last two years.

Sweden.—A remarkable uniformity appears in the full annual statement extending from 1890 to 1911. The range of ratio is from 0.48 to 0.52 of one animal.

Switzerland.—In 1886 this country had 0.42 of one animal in its ratio of cattle to population, and the ratio remained about the same to 1906, but in 1911 it fell to 0.38 of one animal.

United Kingdom.—A country of remarkable uniformity in its relation of cattle to population, although in the long period of years extending from 1890 to 1913 a slight decline is observable. In the earlier years of the period the ratio was about 0.29 or 0.30 of one animal and this gradually fell to 0.26 of one animal in recent years.

The ratio of cows and heifers slowly declined from 0.11 of one animal in 1890 to 0.09 in 1913.

Uruguay.—The record presents notable fluctuations, but among them it appears that according to the census of 1900 the per capita number of cattle was 7.5, and in the census of 1908, 7.9.

Venezuela.—According to the Bulletin of the Pan-American Union there were 2.23 cattle per capita of the population of Venezuela in 1909.

(To be continued.)

New York Section

E. E. Brunner, manager of Wilson & Company's house at Wallabout Market, is on vacation.

Miss Marion Fish, chief telephone operator at the Swift central office for many years, is taking her annual vacation tour.

Swift & Company's sales of beef in New York City for the week ending September 2, 1916, averaged as follows: Domestic beef, 12.60 cents per pound.

Harry Morris, manager of the Swift branch in West Harlem, was married last Friday, September 1, to Miss Katherine A. Kaelberer at the home of her parents at Laurel Hill, L. I. The couple are now enjoying a honeymoon tour.

A petition in bankruptcy has been filed against Edgar W. Behrens, of No. 1095 Fulton street, Brooklyn, who conducted a meat market. His liabilities are approximately \$2,000, and Attorney Leon Dashew has taken proceedings to recover certain property for the benefit of creditors which will realize about \$1,000.

Attorney Leon Dashew has filed a petition in bankruptcy against Leopold Rosenthal, who conducted a meat market on Boulevard, Rockaway Beach, L. I. The liabilities are reported at about \$5,000 and assets about \$1,000, but through proceedings to recover certain property for the benefit of creditors it is hoped to largely increase the assets.

The following is a report of the number of pounds of meat, fish, poultry and game seized and destroyed in the City of New York during the week ending September 2, 1916, by the New York City Department of Health: Meat.—Manhattan, 418 lbs.; Brooklyn, 11,715 lbs.; total, 12,133 lbs. Fish.—Manhattan, 25 lbs.; Brooklyn, 640 lbs.; total, 665 lbs.

Frank A. Harrington, one of the three surviving sons of Dennis J. Harrington, founder of the well-known small stock slaughtering business on the East Side, died on Saturday last at St. Vincent's Hospital of pneumonia. He was 40 years of age and was a graduate of Fordham college and well-known throughout the trade. His home was at No. 24 West Ninth street and he also had a summer place at Larchmont.

It is reported that butcher workmen in New York who acknowledge allegiance to the national union of this craft are planning to strike on October 1, unless their demand for an eight and a half hour day is recognized before then. Rudolph Modest, general organizer for the Amalgamated Meat Cutters and Butcher Workmen's Union, said that the strike would throw at least 2,000 men out of work in this city. He also said that the union locals in Cincinnati, St. Louis and Philadelphia were preparing to strike, and that the movement for shorter hours among

them was being aided by the American Federation of Labor.

Fifty representatives of the Live Poultrymen's Association, whom retail butchers accuse of having advanced the price of chickens in anticipation of the threatened tieup of the railroads, called on District Attorney Swann and declared that the Western shippers alone were responsible for the increases. They told him that one man in West Washington Market, who styled himself the agent of the shippers, dominated the live poultry business in the city and fixed prices. They asked the aid of the prosecutor in protecting their interests, and promised to help in any way he could suggest. On the other hand it is claimed that there was no rise in prices and that this is merely another manifestation of the feud in live poultry trade circles in New York.

The will of P. A. Valentine, New York, formerly a director of Armour & Company, who died at his country home in Oconomowoc, Wis., was filed for probate in the Surrogates' Court in New York City this week. Under the terms of the testament, which was executed in Chicago, August 9, 1905, the decedent leaves his household effects and one-third of his estate to his widow, Mrs. Mary L. Valentine, and appoints her his executor. The residue of the estate is left in the widow's trust for his son, Patrick Anderson Valentine, Jr., aged 13. To his brothers, Alister I. Valentine and Gordon Valentine of Chicago, and a sister, Mrs. Clara J. Wilson, of London, he leaves \$100,000 each. Mr. Valentine was a director of the National City Bank of New York, the Central Trust Company of New York and several other banks.

HIDE AND SKIN MARKETS.

(Continued from page 30.)

buy for less money, if they were disposed to bid. The usual run of buffs nearly all short haired are quoted at 19½ to 19¾c. for business as to lot. Extremes are steady in tone and quoted at 21½ to 22½c. as to lot, hair, etc., outside of short haired patent leather selection. N. Y. State hides 25/up are quoted at 19c. flat. Southern hides are steady at previous quotations. Far southern 19 to 19¼c. flat asked for business in 25/60's and northern quoted at 20c. flat basis. Extremes are slow, ranging from 20½ to 21½c. as to selection. Canadians and New England, all weights, are steady at 18¾c. flat basis in carlots with smaller lots available at ¼ to ½c. less; buffs nominal at 19c. flat asked; extremes 20¾ to 21c. asked.

Boston.

The Boston hide market is still quiet, but good hides are still firmly held at fairly high asking prices. Tanners' views are from ¼ to ¾c. less, but they are buying a few cars here and there just to take care of their immediate needs. Buyers of hides are optimistic in their view regarding the future, as they believe the leather market will soon show signs of activity. However, they are not buying hides now to cover any such action, but say that they are willing to pay the advances at that time if the leather market warrants it. Ohio buffs are offered at 19½ to 20½c. selected. Ohio extremes are offered at 21½ to 22½c. selected. Southern hides are still neglected in this market, although the conditions at the gathering points are still firm and dealers say that the competition forces them to pay strong prices

for all they buy. Southern hides are quoted at 19¼ to 20c. The New England hide market is quiet, with offerings light. Extremes are offered at 21 to 21½c., with all weights at 19 to 20c. These same quotations cover the Canadian market, which is in a condition similar to the New England market.

Offerings of calfskins are very meager in Boston, and holders are asking very firm prices. 4 to 5-lb. skins, which have brought \$2.40 are now being held by some dealers at \$2.50. 5 to 7's are quoted at \$2.90, with some dealers asking another nickel. 7 to 9's are quoted at \$3.40 to \$3.45; 9 to 12's, \$3.90 to \$3.95. The indications in the leather market point to a good calfskin business this fall, especially on skins which are suitable for colors. Both the men's and the women's trade appear to be going strong on Russia calf. If this condition continues, tanners will force the market up by their own buying.

Philadelphia

The market has been very quiet during the past week and the railroad strike has been conducive to trading. The business consummated was for tanners in immediate want of stock. New business is hard to obtain. Sales during week amounted to about 10,000 native steers sold on the basis of 25c. August and 24½c. for July. Also 2,000 outside small packers sold at 24½c. flat for weights. 2,000 buffs sold, all short haired, at 19¾c.

SWIFT EMPLOYEES' FIELD DAY.

(Continued from page 37.)

teams from the three packing companies, was won by the Omaha Packing Company Team, made up of Adelaide Kuhn, Margaret Burggraf, Marie Grady and Elizabeth O'Hanlon. Swift & Company's team, made up of Marie H. Palmer, Gertrude Blasgen, Jessye C. Dalling and Elizabeth J. Hughes, was second. Time, 32 3/5 seconds.

The hundred yard dash was won by Robert Madigan. J. E. McDonald was second and J. J. Borsch third; time, 11 seconds.

The ladies' hippity-hop race was won by Mertina Dahl, of Swift & Company, with Marie Grady, of the Omaha Packing Company, second; time, 12 seconds.

The quarter mile race between winners of the two previous relay races was won by A. R. Tabor, J. A. Menaul, J. Tschupp and W. Schroeder.

The sack race was won by J. E. McDonald, J. G. Clark second, and Adam Ciesieski third; time, 11 seconds.

The soccer foot ball game between the Chicago-Hungarian team and the American-Bohemians was won by the Bohemians. The score was one goal to nothing.

The baseball game was between the Swift & Company and Western Electric Company Commercial League teams. The feature of this was the umpiring by Mordecai Brown of the Chicago Cubs and Ed Walsh of the White Sox. The game was won by the Western Electric by a score of 5 to 3. Uncle Billy Russell and F. H. Frederick presented Ed Walsh and Mordecai Brown with a bouquet each for their services.

Members of the committees in charge were: Managing Committee.—E. L. Ward, chairman; W. J. Callahan, G. D. Chase, R. D. Hebb, H. T. Leslie, M. MacDowell, A. J. Merker, A. M. Kuehne, D. M. Noble, A. D. White, J. R. Williamson.

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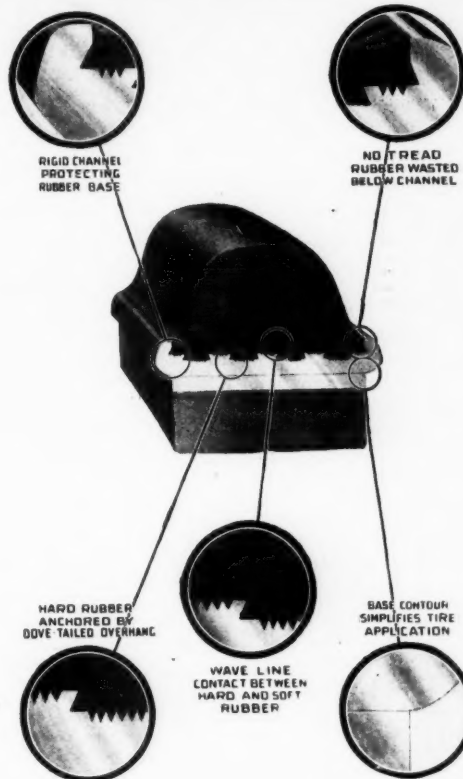
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Oh Key Oh is exactly what its name implies to workers of the yards; it is a call for help. The expression is used around the livestock yards to call the person who is in

charge of the key to certain divisions of the pens. His assistance is necessary to open the gates and allow cattle to pass through. When the charitable organization was first formed among the Swift employees to extend relief to needy families, the name Oh Key Oh was chosen.

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CINCINNATI, O.

NEW YORK MARKET PRICES

LIVE CATTLE.

Poor to choice steers	87.00@10.75
Oxen and stags	8.00@ 8.50
Bulls	5.00@ 6.50
Cows	3.00@ 7.00

LIVE CALVES.

Live calves, com. to prime, per 100 lbs.	10.00@15.00
Live calves, grassers	7.50@ 8.50
Live calves, yearlings	—@—
Live calves, culls, per 100 lbs.	8.00@ 9.50

LIVE SHEEP AND LAMBS.

Live lambs, good to prime	10.75@12.00
Live lambs, yearlings	—@—
Live lambs, culls	7.50@ 9.00
Live sheep, ewes	4.50@ 7.50
Live sheep, culls	@ 4.00
Live calves, culls per 100 lbs.	—@—

LIVE HOGS.

Hogs, heavy	@11.50
Hogs, medium	@11.50
Hogs, 140 lbs.	@11.50
Pigs	@10.50
Roughs	@ 9.75

DRESSED BEEF.

CITY DRESSED.

Choice native heavy	15½@16
Choice native light	15 @16
Native, common to fair	13½@14

WESTERN DRESSED BEEF.

Choice native heavy	@16
Choice native light	15 @16
Native, common to fair	@15
Choice Western, heavy	@14½
Choice Western, light	@14
Common to fair Texas	12½@13
Good to choice heifers	14 @14½
Common to fair heifers	@12½
Choice cows	@12
Common to fair cows	@11½
Fleshy Bologna bulls	10 @10½

BEEF CUTS.

	Western.	City.
No. 1 ribs	21 @22	@22
No. 2 ribs	17 @18	@20
No. 3 ribs	15 @16	@18
No. 1 loins	21 @22	@23
No. 2 loins	17 @18	@22
No. 3 loins	15 @16	@20
No. 1 hinds and ribs	@20	19½@20
No. 2 hinds and ribs	@19	18 @19
No. 3 hinds and ribs	@18	16 @17
No. 1 rounds	14½@16	@15
No. 2 rounds	13½@15	@14½
No. 3 rounds	12 @13	@14
No. 1 chucks	12½@13½	@13½
No. 2 chucks	10½@11½	@13
No. 3 chucks	8½@10	@12½

DRESSED CALVES.

Veals, city dressed, good to prime, per lb.	@21
Veals, country dressed, per lb.	@18
Western calves, choice	@18½
Western calves, fair to good	@16½
Grassers and buttermilks	@13½

DRESSED HOGS.

Hogs, heavy	@14½
Hogs, 180 lbs.	@14½
Hogs, 160 lbs.	@15
Hogs, 140 lbs.	@15½
Pigs	@16

DRESSED SHEEP AND LAMBS.

Spring lambs, choice	@19
Lambs, choice	@18
Lambs, good	@16½
Lambs, medium to good	@16
Sheep, choice	@15
Sheep, medium to good	@14
Sheep, culls	@12½

PROVISIONS.

(Jobbing Trade.)

Smoked hams, 10 lbs. avg.	@20½
Smoked hams, 12 to 14 lbs. avg.	@19½
Smoked hams, 14 to 16 lbs. avg.	@19½
Smoked picnic, light	@15
Smoked picnic, heavy	@14½
Smoked shoulders	@15
Smoked bacon, boneless	@20
Smoked bacon (rib in)	@18
Dried beef sets	@28½
Smoked beef tongue, per lb.	@24½
Pickled bellies, heavy	@16

FRESH PORK CUTS.

Fresh pork loins, city	@23
Fresh pork loins, Western	18½@21
Frozen pork loins	15 @19
Fresh pork tenderloins	@25
Frozen pork tenderloins	@24
Shoulders, city	@16
Shoulders, Western	@15
Butts, regular	@16½
Butts, boneless	19 @20
Fresh hams, city	@18½
Fresh hams, Western	@17½
Fresh picnic hams	@12½

BONES, HOOFS AND HORNS.

Round shin bones, avg. 48 to 50 lbs. per 100 pcs.	75.00@ 80.00
Flat shin bones, avg. 40 to 45 lbs. per 100 pcs.	65.00@ 70.00
Black hoofs, per ton	@ 30.00
Striped hoofs, per ton	@ 40.00
White hoofs, per ton	60.00@ 65.00
Thigh bones, avg. 85 to 90 lbs. per 100 pcs.	85.00@ 90.00
Horns, avg. 7½ oz. and over. No. 1's.	125.00@150.00
Horns, avg. 7½ oz. and over. No. 2's.	@ 75.00
Horns, avg. 7½ oz. and over. No. 3's.	@ 50.00

BUTCHERS' SUNDRIES.

Fresh steer tongues, L. C. trim'd	@24c.	a pound
Fresh steer tongues, untrim'd	@16c.	a pound
Fresh cow tongues	@15c.	a pound
Calves' heads, scalded	@65c.	apiece
Sweetbreads, veal	40 @55c.	a pair
Sweetbreads, beef	25 @30c.	a pound
Calves' livers	@25c.	a pound
Beef kidneys	14 @15c.	a pound
Mutton kidneys	@10c.	a pound
Livers, beef	10 @12c.	a pound
Oxtails	9 @10c.	apiece
Hearts, beef	8 @9c.	a pound
Rolls, beef	@30c.	a pound
Tenderloin, beef, Western	30 @35c.	a pound
Lambs' fries	8 @10c.	a pair
Extra lean pork trimmings	@17c.	a pound
Blade meat	@15c.	a pound

BUTCHERS' FAT.

Ordinary shop fat	@ 3¼
Suet, fresh and heavy	@ 6
Shop bones, per cwt	25 @35

SAUSAGE CASINGS.

Sheep, imp., wide, per bundle	•
Sheep, imp., medium wide, per bundle	•
Sheep, imp., medium, per bundle	•
Sheep, imp., narrow, per bundle	•
Hog, free of salt, tes. or bbls., per lb., f. o. b. New York	@50
Hog, extra narrow selected, per lb.	@70
Hog, middles	@10
Beef rounds, domestic, per set, f. o. b. New York	@13
Beef rounds, export, per set, f. o. b. New York	@20
Beef bungs, piece, f. o. b. New York	@15
Beef middles, per set, f. o. b. New York	@45
Beef weasands, No. 1s, each	@ 7½
Beef weasands, No. 2s, each	@ 4
Beef bladders, small, per doz.	@75

*Owing to unsettled war conditions reliable sheep casing quotations cannot be given.

SPICES.

	Whole.	Ground.
Pepper, Sing., white	22½	24½
Pepper, Sing., black	18½	20½
Pepper, Penang, white	21½	23½
Pepper, red	22	25
Allspice	6	8½
Cinnamon	21	25
Coriander	6½	8
Cloves	19	22
Ginger	18	21
Mace	65	69

SALTPETRE.

Refined	24½@25½
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GREEN CALFSKINS.

No. 1 skins	@ 40
No. 2 skins	@ 38
No. 3 skins	@ 28
Branded skins	@ 32
Ticky skins	@ 32
No. 1 B. M. skins	@ 38
No. 2 B. M. skins	@ 21
No. 1, 12½-14	@4.30
No. 2, 12½-14	@4.05

No. 1 B. M., 12½-14	@4.05
No. 2 B. M., 12½-14	@2.45
No. 1 kips, 14-18	@4.55
No. 2 kips, 14-18	@4.30
No. 1 B. M. kips, 14-18	@4.30
No. 2 B. M. kips	@2.25
No. 1 heavy kips, 18 and over	@5.00
No. 2 heavy kips, 18 and over	@4.75
Branded kips	@3.40
Heavy branded kips	@4.40
Ticky kips	@3.40
Heavy ticky kips	@4.40

DRESSED POULTRY.

TURKEYS.

Fresh killed, dry-packed—	
Spring broiling, 2½ to 3 lbs., each	30 @35
Old hens, dry-pkd., avg. best	27 @28
Old toms, scalded	25 @26
Dry-picked, old toms	27 @28

CHICKENS.

Fresh, dry-packed, 12 to box—	
Western, milk fed, 17 lbs. to doz. and under, lb.	30 @31
Western, milk fed, 18 to 24 lbs. to doz.	30 @31
Western, milk fed, 25 to 30 lbs. to doz.	29 @30
Western, milk fed, 31 to 36 lbs. to doz.	30 @30
Western, corn fed, 17 lbs. and under to doz.	28 @28
Western, corn fed, 18 to 24 lbs. to doz.	28 @28
Western, corn fed, 25 to 30 lbs. to doz.	27 @27
Western, corn fed, 31 to 36 lbs. to doz.	28 @28

Fresh soft-meat, barrels—	
Phila. and L. I., fancy, 3 to 4 lbs. to pair	30 @32
Va., milk fed, 3 to 4 lbs. to pair	27 @28
Western, dry-pkd., 3 to 4 lbs. to pair	27 @27
Western, corn fed, 4 lbs. to pair	25 @25

Fowls—12 to box, dry-packed—	
Western, boxes, 60 lbs. and over to doz., dry-pkd.	22½ @22½
Western, boxes, 48 to 55 lbs. to doz., dry-picked	22 @22
Western, boxes, 43 to 47 lbs. to doz., dry-picked	21 @21
Western, boxes, 36 to 42 lbs. to doz., dry-picked	19½ @19½
Western, boxes, 30 to 35 lbs. to doz., dry-picked	18½ @18½
Western, boxes, under 30 lbs. to doz.	18 @18

Fowl—Barrels, feed—	
Western, boxes, 5 lbs. and over	22 @22
Western, boxes, 4 to 4½ lbs. dry-picked.	21½ @21½
Old Cocks, per lb.	15 @15
Fowl—bbls.—	
Southern and S. W., large	21 @21

Other Poultry—	
Squabs, prime, white, 10 lbs. to doz., per doz.	5.25@5.50
Long Island fresh ducklings	21 @21
Geese, Western, fancy	—@—

LIVE POULTRY.

Chickens	2½ @23
Fowls	1½ @19
Roosters, old	@—
Turkeys	@—
Geese, per lb.	@—

BUTTER.

Creamery, extra (92 score)	33¼ @33¼
Creamery, higher (scoring lots)	34 @34½
Creamery, Firsts	31½ @33
Process, extras	29 @29½
Process, Firsts	27½ @28½

EGGS.

Fresh gathered, extras	35 @36
Fresh gathered, extra firsts	34 @34
Fresh gathered, firsts	32 @33
Fresh gathered, seconds	29 @31
Fresh dirties, No. 1	25½ @26
Fresh chex, prime to choice	23½ @24

FERTILIZER MARKETS.

BASIS NEW YORK DELIVERY.

Bone meal, steamed, 3 and 50, per ton	@30.00
Bone meal, raw, per ton	@35.00
Dried blood, high grade	@ 3.40
Nitrate of soda—spot	@ 5.00
Bone black, discard, sugar house del.	
New York	nom. 21.00
Ground tankage, N. Y., 9 to 12 per cent. ammonia	nom. 3.45 and 10c.
Garbage tankage	@ 7.00
Fish scrap, dried, 11 p. c. ammonia and 15 p. c. bone phosphate, delivered, Baltimore	3.50 and 10c.
Foreign fish guano, testing 15@14% ammonia and about 10% B. Phos. Lime	—@—
Wet, acidulated, 7 p. c. ammonia per ton, f. o. b. factory (35c. per unit available phos. acid)	nom. 2.70 and 35c.
Sulphate ammonia, for shipment, per 100 lbs., guar. 25%	@ 3.85
Sulphate ammonia, per 100 lbs., spot, guar., 25%	@ 3.85

